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Comments on Housing

By William F. Thompson

I SHALL endeavor to outline briefly the old and new methods of housing, which can be divided into the following classes:

- (a) Housing in large cities.
- (b) Housing in small industrial cities and towns.
- (c) Housing in suburban centres in or near large cities or industrial centres.

(a) HOUSING IN LARGE CITIES

Before the enactment of the tenement-house law in large cities (which in this State became a law March 20, 1909) the housing conditions of the majority were deplorable—the usual cold-water flat four, five, or six stories high, twenty-five feet wide, sixty feet deep; narrow, dark halls; narrow and steep stairways; absolutely no ventilation, and four families on a floor. The sanitary condition of these houses was such that the owners might have had an interest in the local undertaker and the nearest cemetery. Disease was spread because of the conditions as stated above. The morals of every one, speaking in a general sense, were not of the highest, and the effect of those that stayed at home as well as those that went forth to furnish bread and butter was most depressing.

Usually those living under conditions herein mentioned worked some years ago from seven in the morning until six at night—under similar conditions of squalor and dirt. If their job was outside and if it rained or snowed they got wet. During the summer if it was outside, it was hot, and they were uncomfortable. There were no facilities at home for bathing freely, consequently they became both mentally and physically unfit—pessimistic individuals, like a shuttle going from their home to their shop or factory and back again at night. This for a period of ten, twenty, thirty, or forty years constituted their life, and they died, and their children followed in their footsteps and naturally became hardened. What would seem to people living in a different environment a terrible state of affairs, to these people was perfectly natural; as is known, a human being becomes accustomed to that which he has.

It is well known that these so-called cold-water flats were the best investment one could have, since they required practically no repairs, there was no heating-plant to get out of order, practically no plumbing, and some poor unfortunate was allowed rent free, perhaps, to keep the place in order, and the owner, in order not to see the way he was deriving his income, would hire an agent to collect the rentals.

(b) HOUSING IN SMALL INDUSTRIAL CITIES AND TOWNS

In the majority of the smaller cities, from my observation, there are perhaps one or two rows of flats which are the beginning of the more citified aspect that the town is to take later on, but for some unknown reason they usually are looked down upon in a community made up principally of one and two family houses, so that naturally the rentals are lower, and the poorest and most unfortunate of that community's population find shelter under the roofs of these tenements.

The conditions as described under (a) apply here, except that there are perhaps large areas of unoccupied ground around these buildings, and for that reason they are perhaps a little more livable; but the yards are usually filled with tin cans, newspapers, and little heaps of ashes. Some of the people, having a little more respect for their domicile, carry their rubbish off to the side a distance of ten or fifteen feet, which usually goes to make up an excellent rubbish-like garden.

The rest of the people in these smaller cities live in small one-family or two-family houses, and the people who need the help, which the various housing committees are endeavoring to supply, are those who can just about make ends meet. The houses that they hire are nine times out of ten those discarded by their more fortunate brothers and sisters who, having advanced another peg, have moved farther out and have left, perhaps because of the encroachment of stores or factories, these houses behind them, and often these buildings being neglected for a short time become ramshackle affairs.

It is human to imitate, and since all of the houses in the section in which we are interested have deteriorated more or less, people arriving and moving into this section look around and find that their house is just about as good as the next fellow's, so they make no effort to improve it, and as it deteriorates about the same percentage every year, there is really no appreciable notice taken of this.

Consequently you have the same condition from this sort of housing that you have from the one described under (a); that is, dissatisfied, pessimistic individuals just walking a beaten path to and from their work.

(c) HOUSING IN SUBURBAN CENTRES IN OR NEAR LARGE CITIES OR INDUSTRIAL CENTRES

Under this heading we will take up the nearest approach that has been made in the past to the solution of the housing problem; namely, the real-estate developments ten, fifteen, or twenty miles out of town, where the average worker

resides under very much better living conditions. This type of development has not been successful for several reasons.

1. Very often the transportation was poor, and the man who worked hard all day had no desire to pack into a crowded street-car and travel for three-quarters of an hour. He therefore preferred the ramshackle affair within walking distance of his work.

2. The real-estate shark had cheated some one whom this man knew, and therefore he would not take a chance, not being sufficiently informed as to the contents of contracts, etc.; that is, if he had any desire to purchase. But usually the first reason is the main one, and is what you will find is given by most men of this class.

3. A great many of these developments were started with the very fine idea of helping the working man and his family, or the business woman, but when the development got under way they could not keep within bounds, and consequently the houses would cost twelve thousand dollars and fifteen thousand dollars, which naturally was beyond the means of the average person, and it immediately became a joke as far as the working man was concerned.

4. There is one more point. Very often a man could purchase property very cheaply, or a house in or very near the shadow of a factory. After putting into it hard-earned savings of perhaps twenty years, he finds within the next five years, just when he is beginning to appreciate his little home, that he is forced to sell to the factory because he no longer can have his children play in the atmosphere of the factory, since it is daily crowding him out.

This has its effect upon the other workers, and they decide that since the so-called working-man's houses cost fifteen thousand dollars and twenty thousand dollars—which is beyond them—and that if they buy near a factory they will be crowded out, they therefore decide to rent and move as may be required to allow for the expansion of business.

The solution of this is the zoning law, which I believe is now operating in most of the large cities, and in the newer cities that are planned all this is taken into consideration originally; that is, a certain area is marked off for factories, for railroad-yards, for wholesale section, for retail section; certain streets only are allowed to have stores, certain sections only allowed to have garages, gas-works, etc., and so on. In the restricted or residential sections they allow only dwellings, schools, libraries, museums, hospitals, and railroad passenger-stations, which means that a person purchasing a house in the right zone can live his entire life in this house without being crowded out by the demands of business. This, as you can see, is what is needed, inasmuch as it is a permanent policy and not, as formerly, one that fluctuates for various reasons. In other words, there is a beautiful little settlement. Everything is fine. Suddenly the railroad decides to run a spur from the main road off to some particular factory. Immediately this spur goes through the section, it deteriorates, and finally becomes a ramshackle village.

Now to get down to brass tacks, all that I have said I know to be true, and if the business man would only appreciate that it is a matter of dollars and cents to him in exactly the way his employees are housed, he perhaps would have long ago realized the folly of allowing such a condition to exist.

Great strides, however, I believe are being taken now to correct this deplorable condition, and small houses economically constructed are being built that are within the reach of the working man. This takes care of one group, a man and his family.

The single man usually can find a place either by boarding with a family or in a boarding-house, or in a reasonable hotel, or somewhere, and as he is practically no bother or trouble, he readily finds accommodations for himself.

The girls and women, however, who are alone do not find it quite so easy to find desirable quarters in which to live. I have read recently in a paper a little discussion on this matter, and several boarding mistresses have written in stating their reasons for the preference given to men over women. The men, they claim, were no trouble; came in and went out and never asked any special favors; never asked for the loan of an iron or the use of the laundry; never changed their rooms around, all of which women, who are the natural home-makers, which is an inborn characteristic, like to do. This is perfectly all right in their own homes, but, as you can see, it makes more work for the lady of the boarding-house, and she therefore resents it.

There is one more point, and that is remuneration. A man will very often pay more because he can, and if what they say is true, that he is less trouble, then from a financial point of view it is to the landlady's advantage to accept him in preference to women.

Now the great question is, what are we going to do about housing the women? A woman has a perfect right to select a career, to go out into the professional or business world and make her own way. She has got to live, just the same as any one else, and in my opinion the big problem is the housing of girls and women, and this extends from the very largest cities to the very smallest towns.

There have got to be housing facilities for those who work in or near a certain city or town. There should be accommodations for the travelling woman, and there should also be in the very poorer sections—which no matter what we do will always be with us more or less, but let us hope less—housing that will take care of some one who has been stranded and is practically out of funds. This sort of building placed in various small communities would be a very good outlet for some wealthy man to do some good in the world.

We therefore appreciate that some constructive programme must be produced for the proper housing of women, and the rates must be reasonable, and also there should be a return on the total amount of money invested, instead of the old way of having wealthy men or women donate so much money for the construction and equipment of a building, and then making up each year by subscription the deficit which the building has incurred.

The budgets shown were prepared to prove that money can be invested at a small return (4 per cent), and at the same time do a great service in helping to solve part of the housing problem.

In one instance the rate is ten dollars per week with two meals a day and three meals on Sunday. This is for the type B, or non-fireproof, building, which is built out ten or fifteen or twenty miles from a city but on a direct rapid-transit line. The other is for a fireproof building in or near a large city, eight stories high, and the rate here is eleven dollars a week for the same accommodation as explained above.

You will probably say that some of the girls cannot afford any more than six dollars a week or even five a week for room and board, and that that is the reason a great many of the boarding homes have shown a deficit. And in this you are right. But if we continue to aim to help the girl who can only pay five dollars or six dollars a week, we are defeating our purpose. By that I mean that if we can show financiers that we can carry on our work in a business-

like way, show a 4 per cent investment to them, and at the same time do good for the girl that can pay ten dollars or eleven dollars a week, are we not helping out this class and doing some good? Whereas if we continue to go to the wealthy people constantly asking for something for which we get nothing in return, we are killing the goose that laid the golden egg.

I believe that eventually a revolving trust fund will be evolved, and that through this, and in view of the inevitable lower material market for building, that buildings will be constructed and run on such economical plan that the rates can be reduced perhaps to average seven dollars to nine dollars a week, and perhaps a little less.

There is one point that I want to mention, and that is that no matter how well planned a building is, no matter how economically it is constructed, no matter how economically it is furnished, the big thing is the management. This is just as important as the economically planned and constructed building, just as important as the location of this building, and with this in mind an effort should be made to institute real training for the executives to manage these boarding residences.

My recommendation for this would be not to have this instruction by means of books or special classes, but by supplying to the best boarding homes now extant women who are desirous of becoming executives, and placing them under the direct control of a competent, practical executive secretary.

Further, before this person is accepted to work for and be trained by this executive secretary, she should be interviewed by a person who is capable of reading characters, so as to be sure that you are not using up the time of your trained executive on some one who will not in the future make good because of not being properly constituted for this kind of work. In other words, a square peg in a round hole very seldom gets anywhere. Therefore, you want to be sure that the right person is trained and is particularly adapted to this particular kind of work before wasting time on it.

In my opinion, if the employer of women would realize that he is paying a very high rate because of inadequate housing facilities, he would put his shoulder to the wheel and make every effort to better housing conditions generally.

If a girl goes to a dingy, cold, ill-ventilated, poorly decorated, inadequately and poorly furnished room, you can imagine her state of mind when she arrives at her place of business each day to perform her various duties. She cannot help (for it is human) taking every opportunity to think of herself and how she can better her condition. While we realize this should not be done during working hours, we also know that self-preservation is the first law of nature. Therefore, a girl thinks all day how it would be possible for her to get another position, to obtain more money, and to move her few belongings to a more desirable room. The employer pays for this, but he has been so short-sighted in the past that he did not realize it.

I believe that, since we have shown how boarding residences for girls and women can be placed on a paying basis,

and since I believe the employers will agree that the above description is true (if they will investigate), they will be very anxious to subscribe to building a boarding residence that will enable a girl to go to her place of business each day with her mind free from any thoughts of bettering her condition, because she is satisfied, having a room that is warm and clean, bed-linen clean, color scheme interesting, electric lights instead of an oil-lamp, a cosy, livable, well-appointed living-room in which to receive her men friends, and, in short, beginning to live for the first time. The employer now is also beginning to realize nearly 100 per cent efficiency from this girl, and it is to his advantage financially, and it is to her advantage morally, physically, and mentally. Therefore, this is a true solution of one part of the housing problem.

There is another point I wish to make in connection with the housing of girls in what are known as boarding residences. To begin with, we will see the exterior of a building before we see the interior. I do not mean by that that all of the money should be spent on the beautiful elevation; but I do mean that the building should be inviting. I mean that it should be domestic in its character. I mean that it should speak of hospitality, and that it should not give to the untrained eye the appearance of a mansion, a hotel, a wonderful club building, all of which tend to keep out the very girl whom we are desirous of helping—a simple brick façade, well-proportioned windows properly distributed, the first-story windows perhaps having flower-boxes with nice plants or drooping ivy, and a very simple but homelike-looking entrance; not a lot of Italian marble and tile wainscots and floors and large-arched openings, so that the girl is reminded of going from one office-building into another—which is wrong.

We will assume that we have the charming, simple, refined entrance and exterior to our building that is inviting. The girl who is not too well dressed is not afraid to go into it, as she would be to go into perhaps the Biltmore Hotel. And now we come to the interior of this building. How shall we design it?

The very greatest thing that we can do is to make it homelike. The proportion of all the rooms should be generally about as are designed for a large residence, and the furnishing of a room should be similar to a residence and not hotel-like.

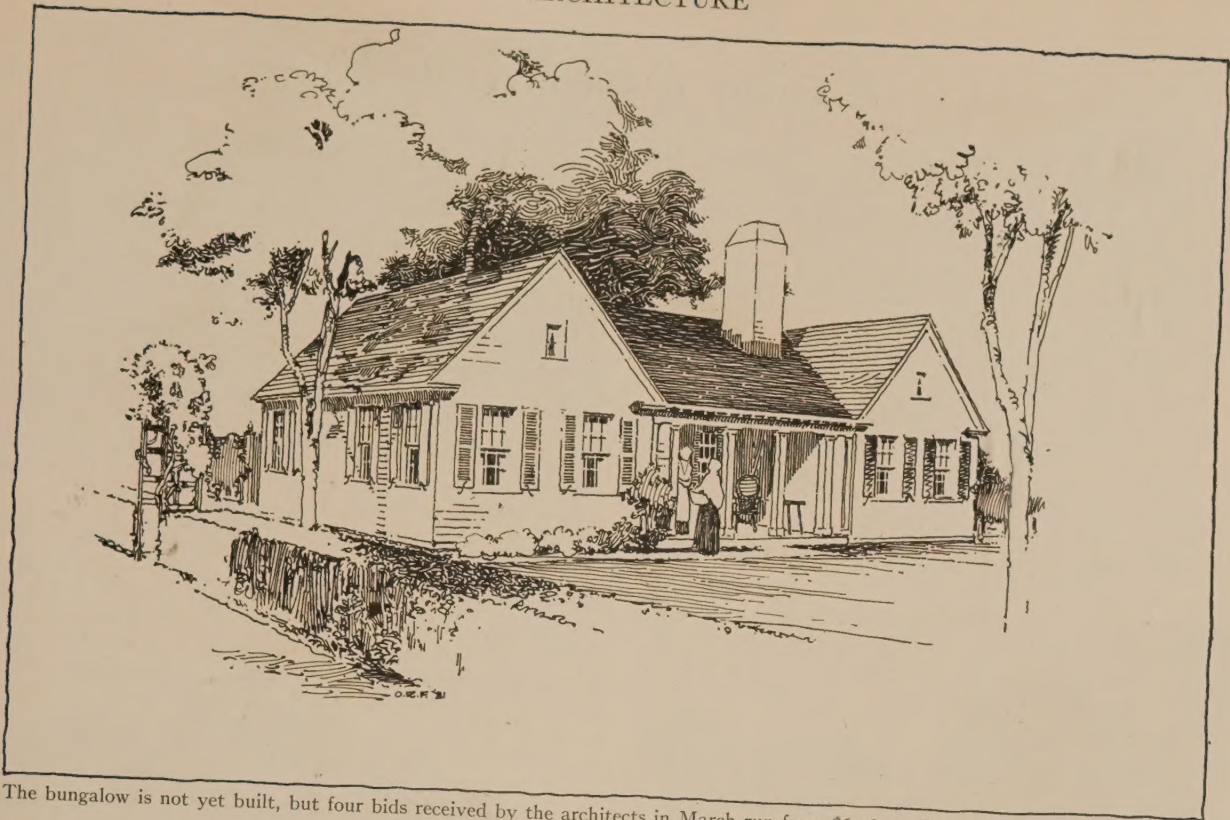
Another point, and a very important one, is that immediately upon entering the building, if it is of the eight-story type and requires an elevator, the elevators should be out of sight, and a staircase and a fireplace should be in evidence, so as to immediately impress the prospective inhabitant with the homelike atmosphere and keep from her as long as possible the fact that, after all, this is nothing more than a boarding residence.

Then again, of course, in order to have the correct atmosphere, it comes back to the executive secretary and her personality. But if the building is designed as described above, a great part of her battle will be simplified, since the stage will be set in the proper way, and she will only have to supply the personal touch which is required in everything.

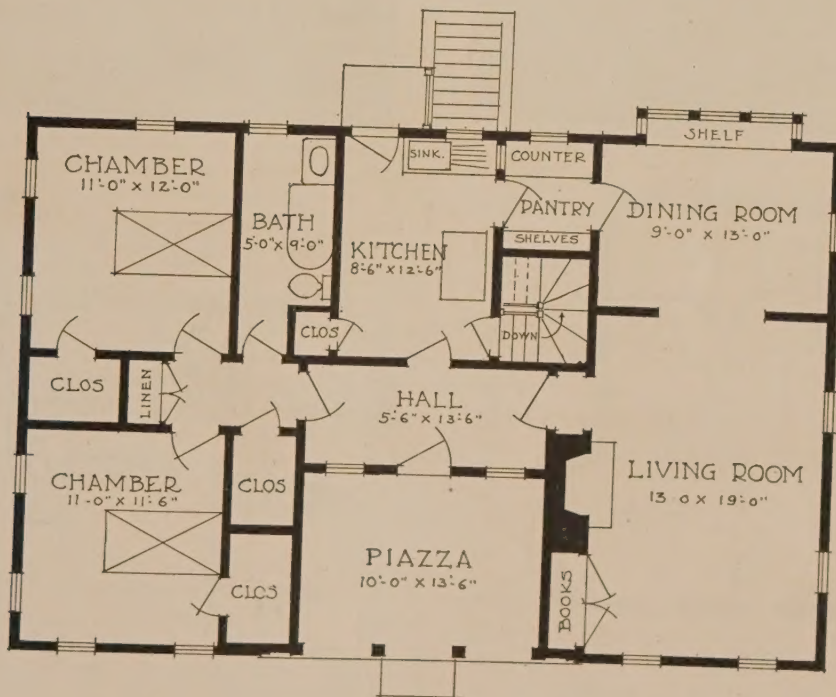
EARLY AMERICAN DOORWAYS—The White Pine series of monographs are invariably beautifully gotten up and admirable in selection of subjects. The one just received, "Comparative Study of a Group of Early American Doorways" from photographs by Kenneth Clark with notes

by Aymar Embury II, contains a number of fine old doorways.

In this number is announced a programme for a Three Teacher Rural School with Teachers' Cottage.



The bungalow is not yet built, but four bids received by the architects in March run from \$6,965 to \$7,328.



FIRST FLOOR

SCALE $\frac{1}{4}" = 1'-0"$

BUNGALOW AT FRAMINGHAM MASS.

KILHAM & HOPKINS ARCHITECTS BOSTON MASS.

A Group of Small Houses

THE elimination of purely architectural features in the modern small house has grown to such an extent, due to the necessity for the most rigid economy in cost of erection, that the average building of to-day, costing from \$7,500 to \$15,000, must depend almost entirely upon the simplicity of its color scheme and the proper use and distribution of openings.

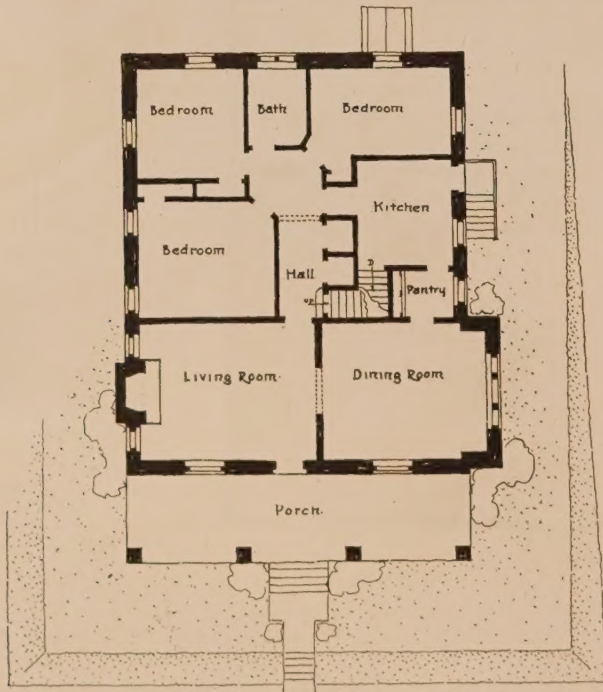
Several years ago, when conditions of cost were so much better, a house costing such an amount of money allowed with it the possibility of including as a part of the building features of design which under the spur of to-day's prices must be left out, for the cost of such features must be carefully counted in order to provide the requisite spaces and practical requirements.

This has brought about, therefore, an entirely different point of view toward the average house of that size, and the

architect has had to change completely his method of designing and planning so as to fit the house to the purse. This has been exceedingly difficult, and more often than not the sacrifices entailed have caused the house to lose its attractiveness from the architectural point of view. This has been unfortunate. A firm of Philadelphia architects has succeeded in designing houses not only within the stipulated prices, but as well have preserved their architectural interest.

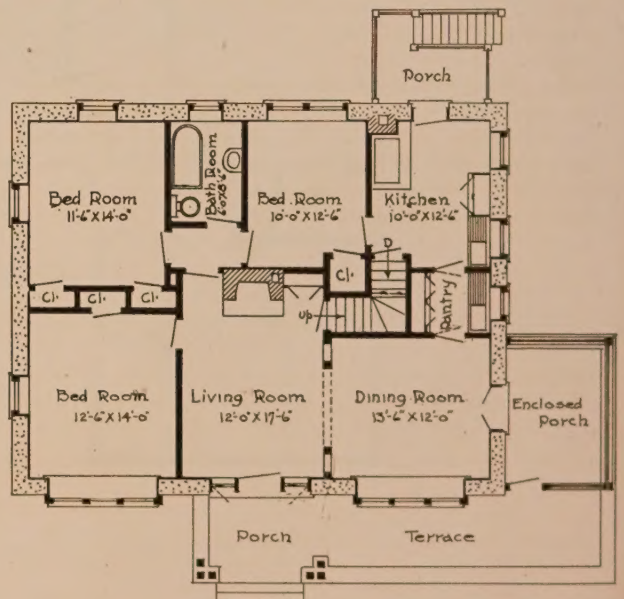
Philadelphia is noted for the many successful types of small houses which have been evolved by its architects. Those illustrated herein, from the office of Boyd, Abel & Gugert, are successful, both from the point of view of the design and arrangement. Even under to-day's prices these houses are within the pocketbook of the average owner. They are not extravagant in any way.

The stone bungalow at Narberth for Mr. Walker A.

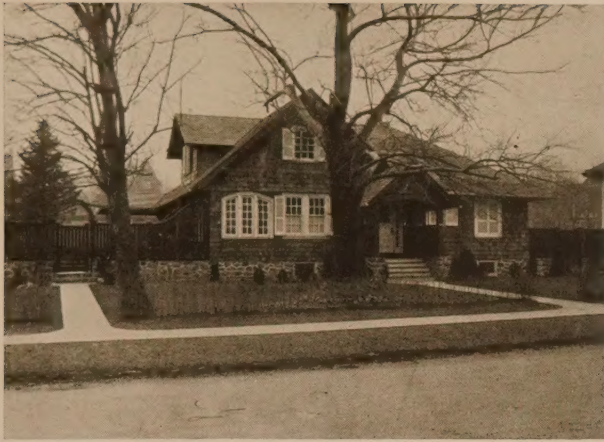


First Floor Plan.

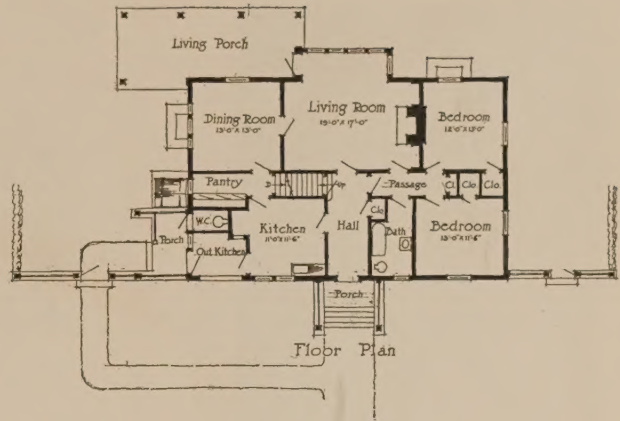
Bungalow, Walker A. Fox, Narberth, Pa.



Bungalow, R. H. Johnson, Wayne, Pa.



Bungalow, Mrs. E. G. Anthony, Wayne, Pa.



Fox is situated practically on the crown of a hill, and the problem was to avoid exceptional height, so as to not only fit its location but not to overpower the surrounding houses, all of which are on lower levels. The entire living and sleeping quarters of this bungalow are on the first floor with a convenient arrangement as to kitchen and pantry. The exterior facing is of stone with the woodwork painted white and with a dark-green slate roof.

The bungalow at Wayne, Pa., for Mr. R. H. Johnson was fitted into the side of a hill, advantage being taken of the slope so as to give access direct to the basement, where the laundry was placed. The exterior walls are faced with a stone of a soft, dark rusty-brown color, which was obtained in the neighborhood, and pointed with wide white joints. The shingle roof was left to weather naturally.

The house at Wayne, Pa., for Mrs. E. G. Anthony was designed for a problem of different sort. It was laid out as a servantless house, with all living and sleeping quarters on the first floor, the second story being used for storeroom purposes only. The entire exterior facing and the roof were red-wood shingles, left to weather to a natural soft dark brown. The exterior woodwork, with the exception of the window-frames, was all stained a dark brown to match shingles. A wood fence was carried across the front of the house, giving privacy to the ground space in the rear, where the main living-room and porch were also placed.

The three houses at Wayne, Pa., for Fallon & Harris have approximately the same amount of space in each house. They were built in the neighborhood where it was impossible to duplicate houses with success, and it was necessary

to design four houses of similar requirements and different exteriors, but yet erected and salable for approximately the same prices. To accomplish this, stone, plaster, and clapboards were used in combination with shingle roofs. The woodwork was all painted white, the difference of design and color being left to the material and to the arrangement of the openings.

The house at Narberth for V. D. Abel is a combination of stone whitewashed to the second-story line with rough plastering above. The roof is of a rough graded and variegated slate. The entire house is informal and conforms more to the farmhouse type of architecture for which Pennsylvania is famous.

The house for Mr. Wm. T. Harris at Narbrook Park is perhaps the smallest of the entire group, the minimum amount of space for living requirements of to-day having been provided in order to bring the cost to the lowest possible point, and yet there has been no sacrifice of design from the exterior, which is sufficiently attractive to bring it away from the stereotyped small house.

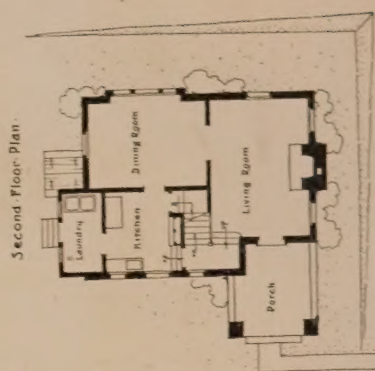
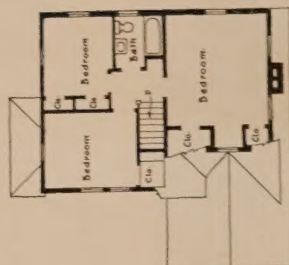
The house in Narbrook Park for M. N. Collins is an unusual type. Located on the side of a hill, it was possible to open one full side to a large sweep of lawn, while at the same time giving the living-room the full benefit of the prevailing summer breezes. The dining-room has French casement doors opening to an outside terrace. The base of the house to the first floor window-sill is of brick, above that plaster with a roof of red tile. The whole scheme makes an exceedingly pleasant contrast, and affords a pleasant background for the planting around the house.

Summer Session at Columbia

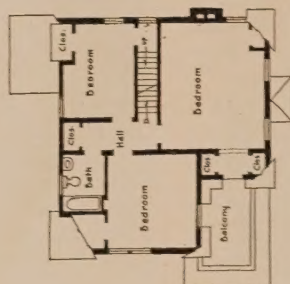
THE experiment in training students of architecture with three dimensional models has proved so successful in the regular work of the Columbia School of Architecture that courses in technic of model-making will be given under the summer session, which begins on July 5 and continues for six weeks, and for which an attendance of more than 12,000 students is expected.

The classes in the technic of model-making will be given in the evenings so that students who are occupied in work during the day will be able to attend. Harold V. Walsh, instructor in architecture at Columbia, will give the course, which is one of a large number of summer courses in architecture.

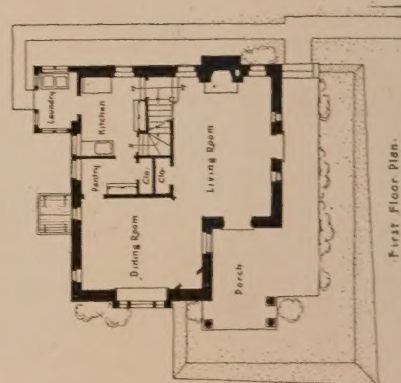
Courses in shades and shadows, perspective, pencil drawing, advanced design, water-color drawing, charcoal drawing, elementary design, elements of design including the application of orders, domestic architecture, antique and life drawing, and a course in the fundamental technic of architectural drafting as practised in the average office are among those offered for the summer semester. Credit toward the degree in architecture for students who have satisfied the entrance requirements will be given all students completing the architectural courses. The courses are also open to all qualified students without examination.



First Floor Plan.
Boyd, Abel & Gugert, Architects.



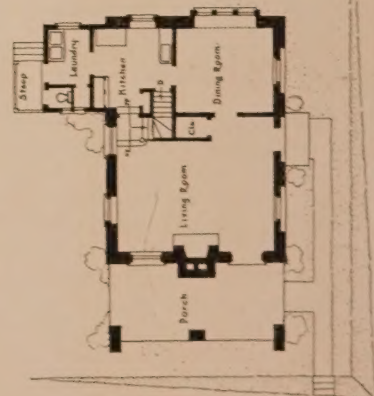
Second Floor Plan



First Floor Plan

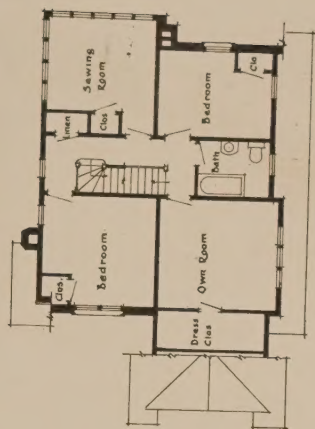
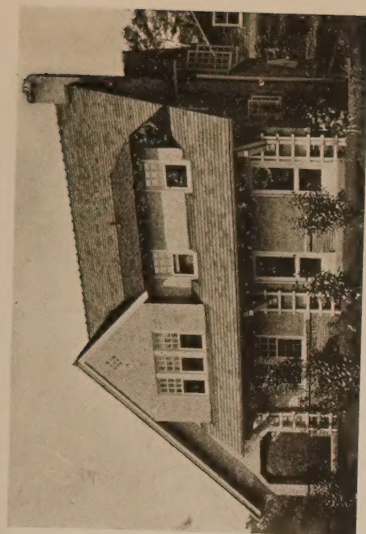


Second Floor Plan

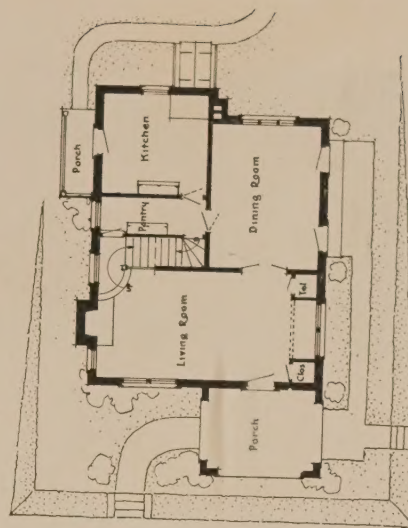


First Floor Plan

THREE HOUSES FOR FALLON & HARRIS AT WAYNE, PA.

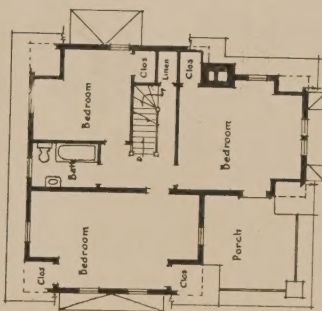
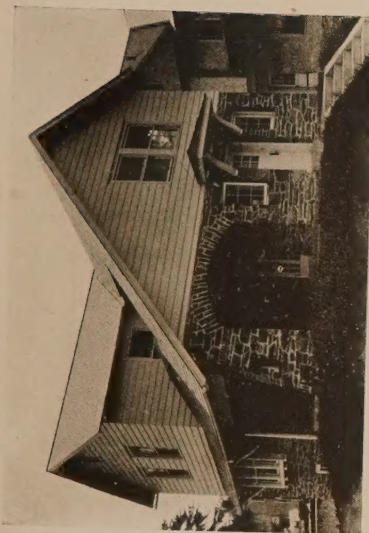


Second Floor Plan

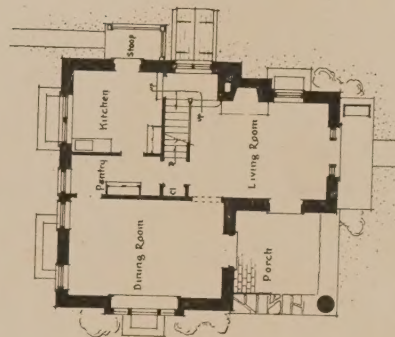


First Floor Plan

HOUSE, M. M. COLLINS, NARBROOK PARK, PA.



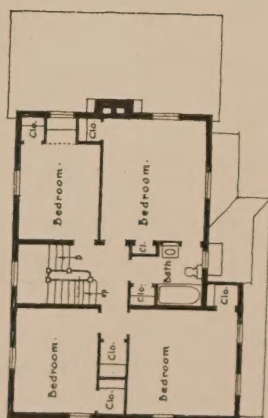
Second Floor Plan



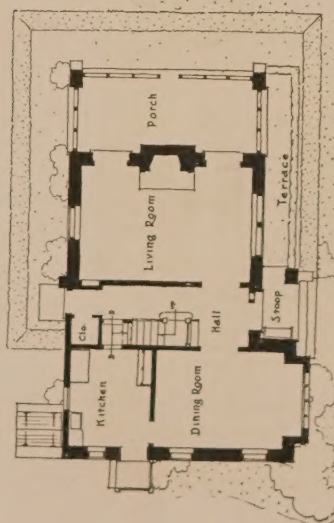
First Floor Plan

HOUSE, WM. T. HARRIS, NARBROOK PARK, PA.

Boyd, Abel & Gugert, Architects.

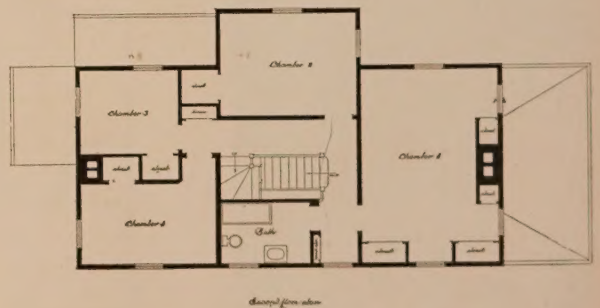
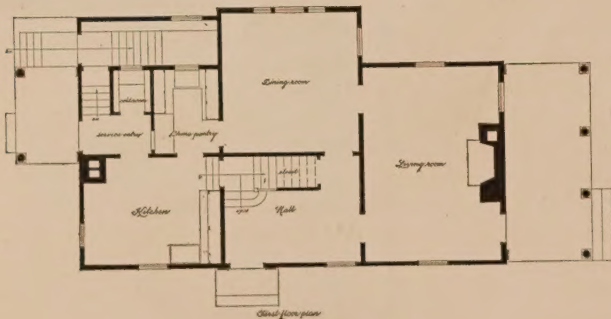


Second Floor Plan



First Floor Plan

HOUSE, VICTOR D. ABEL, NARBERTH, PA.





Editorial and Other Comment

Money and Building

WE wish it were possible to compile some statistics regarding building and costs that would have the convincing value of definiteness and permanency. Abundant figures are available regarding current costs of materials, but they are current only, and no prediction can be made with any certainty regarding the future. The news of the material market as a whole is about as uncertain and as speculative as the daily reports of the stock-market, and values are about as problematical when it comes to investing real money with a view to a stable income.

One thing is very evident with regard to building, needs no comment on our part beyond the mere reference to the fact, capital is standing pat, waiting for a break in present prohibitive costs. We have often referred to the part that labor plays in the matter, there's the rub, apparently.

The crux of the situation seems to be the utter lack of foresight upon the part of labor to realize that if there is to be little building, there is to be little work. The logic of situation seems so obvious that we are quite sure that the intelligent labor element are perfectly aware of the condition, and we believe ready to remedy it, in the only way possible, if the bosses would only permit.

The bosses do not suffer, their salaries are paid, and the big boss receives a salary that we should think would make many skilled workmen wish they might go back to the old freedom of individual initiative.

The New York Trust Company has recently expressed some views that are impressive by their truth, and we wish they might be read by the labor-union chiefs:

"Neither banks nor others with capital to lend are going to lend it for this purpose so long as building is not believed to present a safe or profitable investment, and this will be true as long as excessive costs prevail.

"A house, the materials for which alone cost \$3,000 in 1914, would now involve a cost for materials of \$6,600. To this rise in prices of material must be added the increase in labor cost of construction since 1914. Not only is the high cost of building holding up operations by making prospective builders wait for lower prices, but it is responsible for the belief that at present prices building is not the safe and profitable investment that it should be to invite capital."

Small Houses

WE are publishing a number of small houses in this number, and we shall continue to publish many during the summer and fall.

In looking about the country we are rather surprised at

the number of houses that are going up, considering the question we have dealt with above. If costs could be prognosticated with any certainty, we should very soon see ten small houses building where now there is one.

It isn't a question of people not wanting to build but of not being able to build. There are thousands of men in our cities ready to own their own homes the minute they can see the way to finance them. City rentals, especially in apartments, are a thing enskyed, and but for restrictive legislation in New York State, the last penny would be the only limit. It has been a get-rich-quick game with owners of tenement property of all kinds, and the man of modest earnings has suffered most.

Thousands who visit the Own Your Own Homes Expositions will be among the first to avail themselves of better conditions. Thousands whose business demands their presence in cities in order to be conveniently near their places of employment are beginning to think that there is "no place to go but out." But the congestion in commuting-distance suburbs is almost as great as in the city, and a feeling of rebellion and bitterness against profiteers, be they capitalists or workmen, was never so much in evidence.

Some of us who have watched the influx of foreign labor during the past ten or fifteen years, and a few who have in the past seen thousands march down Fifth Avenue on some May day, with the red flag as their emblem of loyalty and not a word of English to throw at a dog, are inclined to exclaim: "My country, O, my country, wake up, shut down the gates!"

The Architectural League Show in Retrospect

WE may not quite agree with the critic who said there was nothing to find fault with, that the show was perfectly organized and a marvel in every detail, but as we did say in an editorial last month, we think it was the most distinguished exhibition in the history of the league.

Never before did sculpture have such a fine showing and the murals were, with exceptions, as usual, worthy of serious consideration. We like to believe that we are on the way to a revival of public interest in mural decoration, and that they are going to be closer to and more expressive of our new national ideals.

Certainly there are more and more of the younger men among our painters who are showing an aptitude for mural work. Our old masters still dignify and ennoble their calling, but we must be prepared to meet new times with new ideals and methods, while still respecting the fine tradition established by the older men.

Draftsmen and Reading

By David B. Emerson

IT is unfortunate but true that the great majority of young draftsmen and technical-school graduates are poorly read. The fact was very forcibly brought home to the writer recently when in conversation with two young men who were recent graduates of technical schools he was surprised to learn that neither of them knew who Augustus St. Gaudens was, and yet both were ardent admirers of Stanford White, but had read so little that they did not know the name of the sculptor who collaborated so many times with White, and had been his friend and boon companion for so many years. Now, it is not the province of this short article to prescribe a reading course which is to make every draftsman a well-read man. That is too big a problem and too difficult, and, besides, President Eliot has already given us the "Five Foot Shelf." There are, of course, any amount of books that are valuable and the reading of which will help the young man, but time is also valuable, and the study of architecture is, in itself, a man-sized job. Still, the great necessity is to avoid one-sidedness and to acquire a general knowledge, most particularly a knowledge of the history of architecture and the allied arts; also to gain the critical and analytical view which will enable them to judge the arts with which they are associated.

Probably one of the best methods of assimilating the history of art and architecture is the study of general history—to learn of the times when art and artists lived. The young man who knows the history of Greece, Rome, and Byzantium is far better able to appreciate the history of the art and architecture of those countries than one who merely knows the five orders and the countries in which they had their origin. One who has read the history of the Middle Ages and the Renaissance will appreciate Gothic and Renaissance architecture far more than one who merely knows the styles, and knows nothing of the life and times that gave them birth.

There are a few books, however, which will help wonderfully to broaden the view and enrich the mind of the young draftsman, and which are not so dull and dry that the reading of them is a task and must be taken up as so much labor toward a given end, as much of what is studied in the schools amounts to. One of the most instructive and interesting books dealing with art, more particularly with painting but applicable to all of the arts, is Sir Joshua Reynolds's "Fifteen Discourses," easily read in fifteen hours, and very well worth the effort. Mr. Whistler's "Ten

O'Clock" can be easily read in less than an hour, and it will be an hour well spent.

To gain an insight into the art life in Italy in the sixteenth century there is no book better than the "Memoirs of Benvenuto Cellini," after which one should read Symonds's "History of the Renaissance." To learn of the life and history of the Middle Ages and the art and philosophy of that period there is perhaps no book which gives a better and clearer insight into the spirit of those times than Henry Adams's "Mont St. Michel and Chartres." "Mediæval Architecture," by A. Kingsley Porter, is without a doubt the most scholarly history of the architecture of that period. Ralph Adams Cram's "The Gothic Quest" and "The Substance of Gothic" are also both of them very excellent studies on the subject, and, like everything which Cram writes, they are very readable and very interesting.

The reader can learn much that is interesting and instructive of the art and artists of Italy from the thirteenth to the sixteenth century by reading the biographies of the greater and better-known artists in Vasari's "Lives of the Most Eminent Painters, Sculptors, and Architects," and omitting many of the lesser ones who are of no particular interest and whose work is practically forgotten. Vasari, although often inaccurate and sometimes unfair, is interesting, and in practically all cases his estimate of the men and their work is correct. To properly enjoy Vasari the writer would advise the casual reader to avoid reading the footnotes, as they detract from the pleasure of reading the author's version, and are only valuable to those who are making a deep research on the subject. Kenyon Cox's "Concerning Painting" and "The Classic Point of View" are pleasant and instructive reading, and give a good critical analysis of that branch of art.

These few books are only a very small part of what has been written on art and architecture, but are suggested as they are not only instructive but interesting, and are a very good start in forming the habit of reading, which unfortunately seems to be rapidly becoming a lost art. It is unnecessary to say that with the specialized reading it is necessary to do some general reading as well, as an architect should be a broad-minded, well-informed man, and every really brilliant architect whom the writer has ever known was a well-read man; and as draftsmen are potential architects, draftsmen to succeed must read, and read to remember and not read to forget.

Book Reviews

THE BOOK OF BUNGALOWS. By R. RANDALL PHILLIPS, editor of *Our Homes and Gardens*. Charles Scribner's Sons, New York.

The bungalow has come to mean especially a house that provides a series of rooms all on one floor. It is the ideal small house for those who want to minimize household cares, and it can be made a little or a large house, of picturesque outward aspect and of cosey and compact interior arrangement. Many things are built, however, in the name of bungalow that "become a piece of architectural Turkish delight—made banal with embellishments of a monstrous fretwork kind."

While Mr. Randall's book deals with English bungalow types only, he shows a number of designs that are adapted for all countries. He points out the fact that the bungalow is not necessarily a cheap house; in fact, a large roof may bring the cost to equal that of a two-story house. He discusses the matter of "Planning and Design," "Methods of Construction," "Equipment," "Furnishing."

There are a number of large and small examples shown with elevations and plans—built of wood, stucco, brick, half-timber.

The book contains practical suggestions for both architects and laymen. It is interesting to note that where gas and electricity are available

American inventions are not overlooked, and where they are not available cooking needs are met by the new oil-stoves, "most of them of American manufacture."

HOW TO PLAN, FINANCE, AND BUILD YOUR HOMES. A book that has grown out of the work of the Architects' Small House Service Bureau of Minnesota; contains over a hundred illustrations of houses and plans. It is published for the Southern Pine Association, New Orleans, by the Architects' Small House Service Bureau of Minnesota, Inc.

The bureau was formed for the purpose of making the professional skill and trained ability of architects available for the small-home builder. The American Institute of Architects and its committee recognized the fact that the small house or home building of this country was being done in a more or less "hit or miss" fashion, and that the architect had little or nothing to do with it, and they believe that the Architects' Small House Service Bureau idea is the solution, as was shown by their indorsement. Credit is due to the Southern Pine Association for believing also that this was the solution, and for making it possible for the Minnesota Bureau to present its completed service at such an early date.



SALESROOM, CAMMEYER BUILDING, 677 FIFTH AVENUE, NEW YORK.

W. L. Rouse and L. A. Goldstone, Architects.



CAMMEYER BUILDING, 677 FIFTH AVENUE, NEW YORK.



SALESROOM.

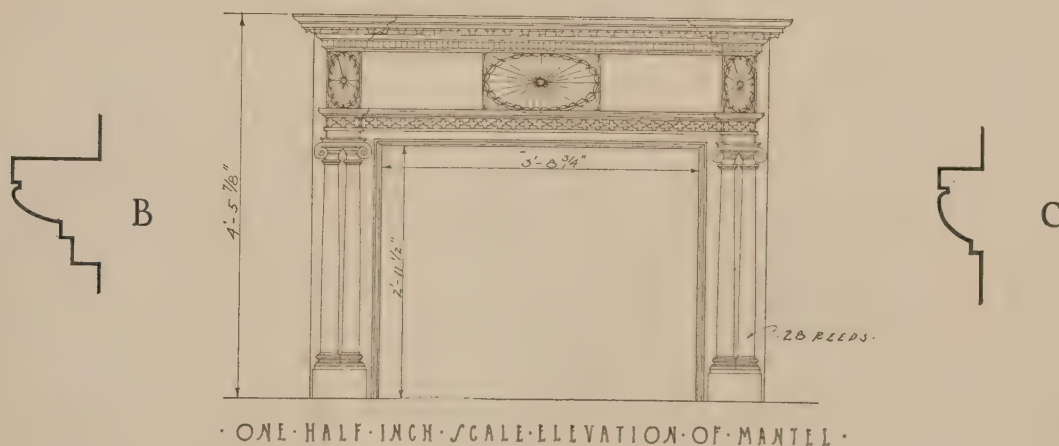
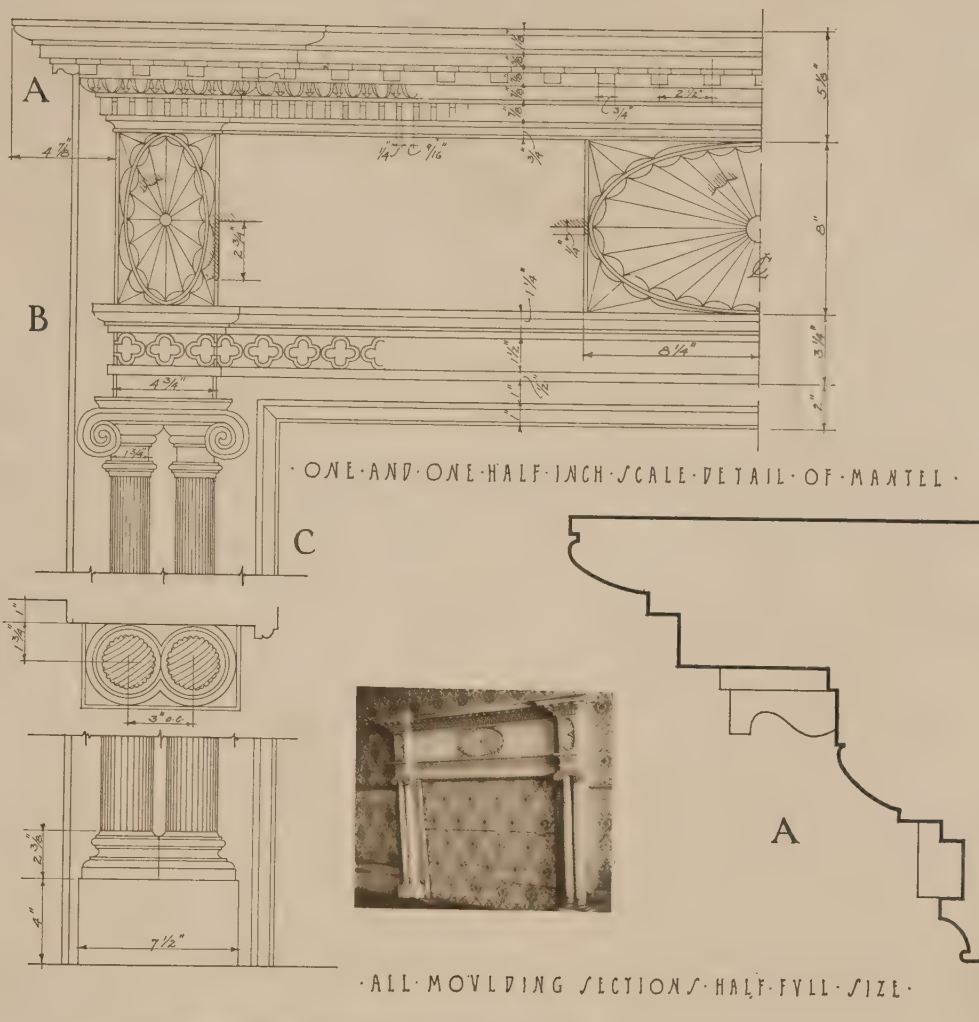
W. L. Rouse and L. A. Goldstone, Architects.



MANTELS IN SALESROOMS, CAMMEYER BUILDING, 677 FIFTH AVENUE, NEW YORK.
(GRINLING GIBBONS CARVINGS.)



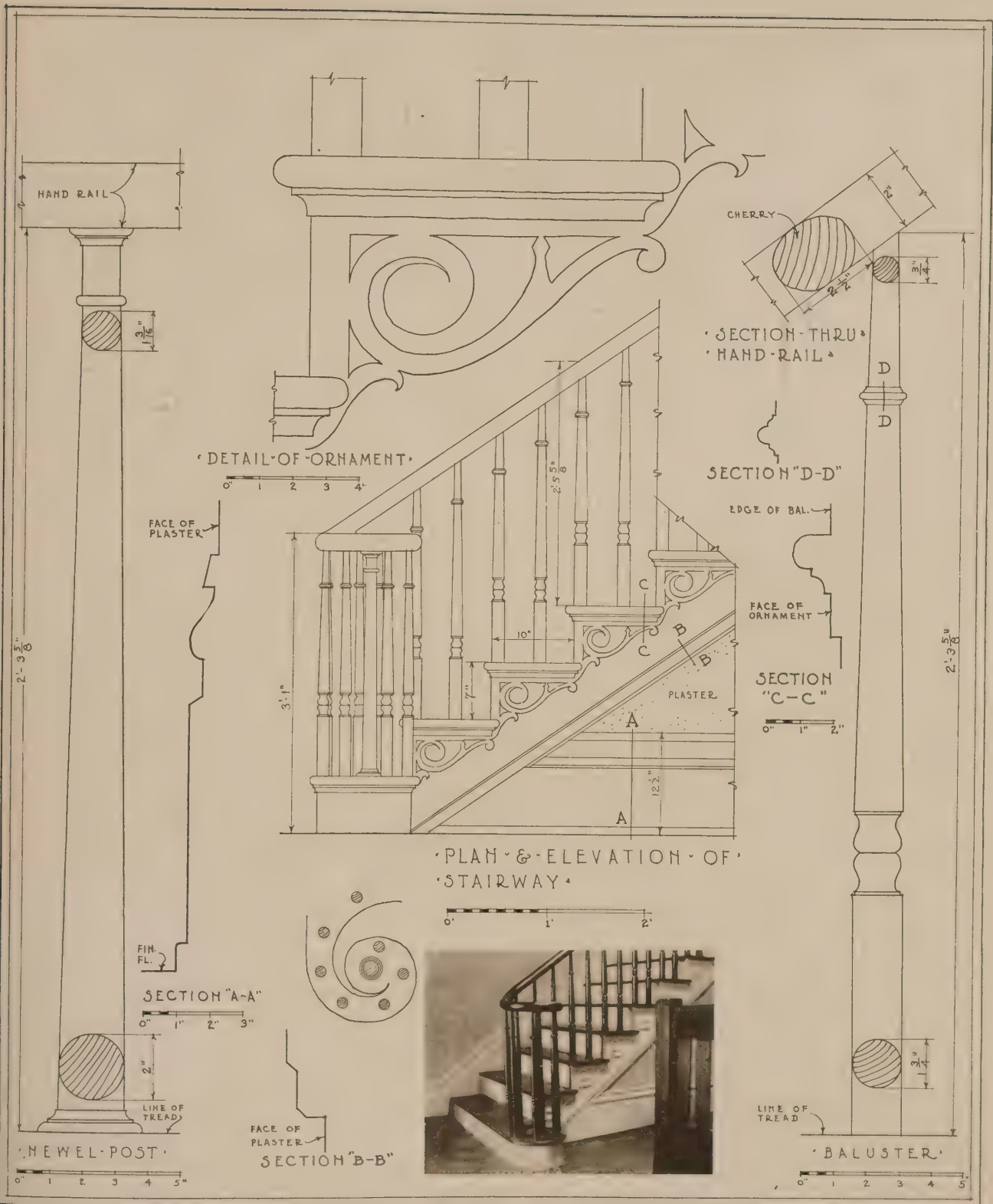
W. L. Rouse and L. A. Goldstone, Architects.



EARLY
ARCHITECTURE
OF
CONNECTICUT

MANTEL in the BASSETT HOUSE
HAMDEN
CONNECTICUT

MEASURED
AND DRAWN
BY
J. FREDERICK KELLY



EARLY COLONIAL ARCHITECTURE OF THE OHIO VALLEY	STAIRWAY IN THE OLD WILSON RESIDENCE NEWARK OHIO	MEASURED & DRAWN BY Daniel W. Werry
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HOUSE ON THE TURNPIKE, NEWBURYPORT, MASS., FOR MISS ANNE M. PAUL.

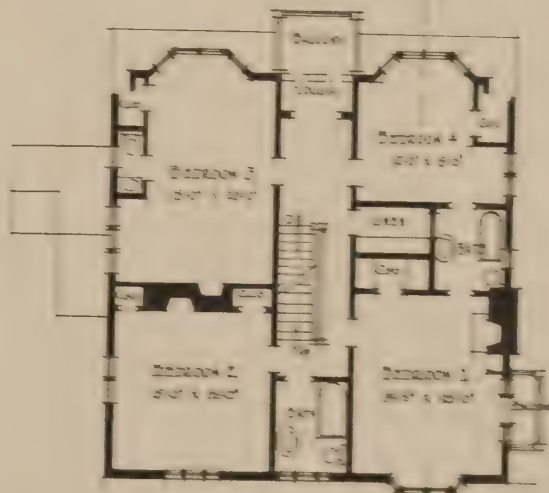
Lois L. Howe & Manning, Architects.



LIVING-ROOM, TOWARD HALL.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



LIVING-ROOM.



DINING-ROOM.

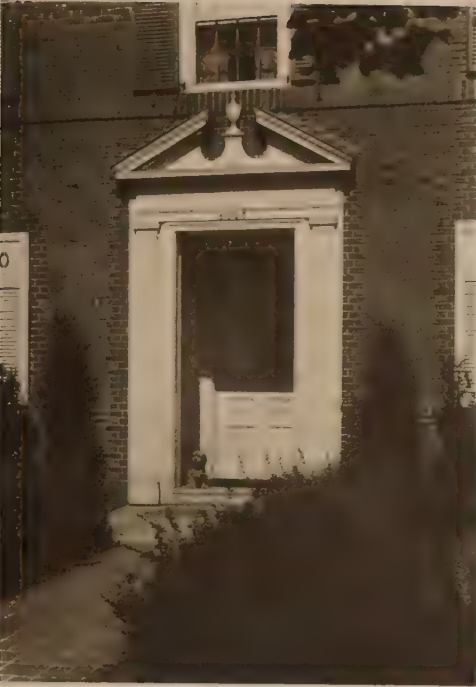
Lois L. Howe & Manning, Architects.

HOUSE ON THE TURNPIKE, NEWBURYPORT, MASS., FOR MISS ANNE M. PAUL.

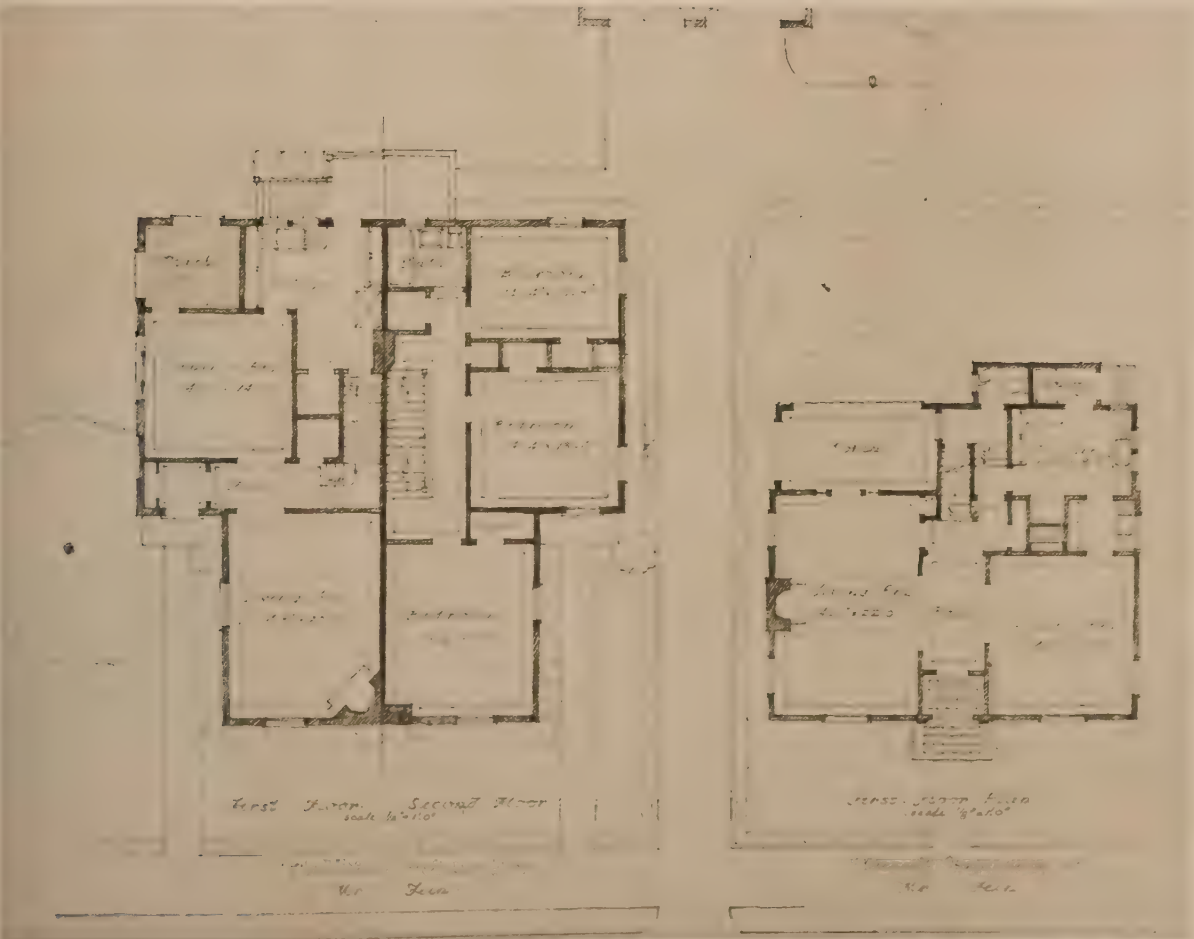


HOUSE, ROBERT FEIN, RIVERDALE-ON-HUDSON, N. Y.

Dwight James Baum, Architect.



DETAILS.



PROPOSED DOUBLE HOUSE ADJOINING PRESENT HOUSE ROBERT FEIN, RIVERDALE-ON-HUDSON, N. Y.
Dwight James Baum, Architect.



DESIGNS FOR DOUBLE AND SINGLE HOUSES FOR ROBERT FEIN, RIVERDALE-ON-HUDSON, N. Y.

Dwight James Baum, Architect.



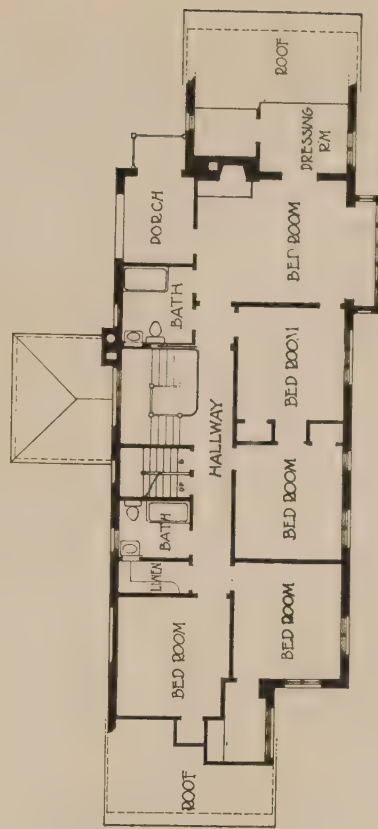
HOUSE, MELVILLE G. CURTIS, CYNWOOD, PA.

Edward Buchler Delk, Architect.



FIRST FLOOR PLAN

HOUSE, MELVILLE G. CURTIS, CYNWOOD, PA.



SECOND FLOOR PLAN

Edward Buehler Delk, Architect.



HOUSE AT SANTA BARBARA, CALIF.

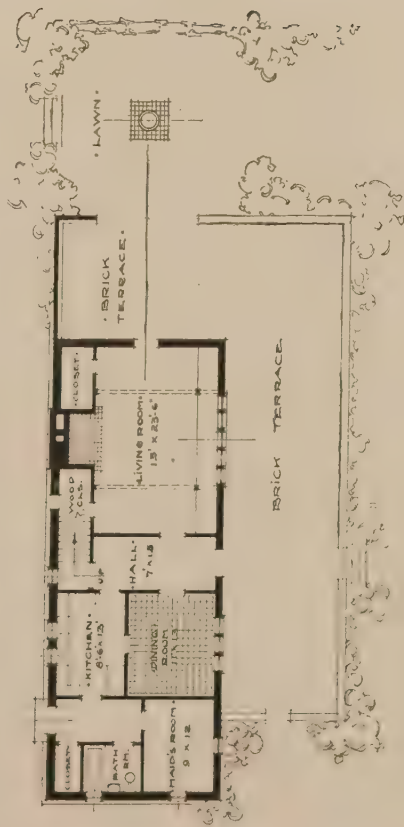
E. W. Neff, Architect.



HALL.

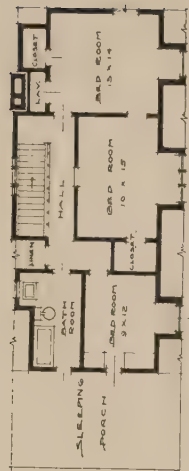


LIVING-ROOM.



FIRST FLOOR PLAN.

HOUSE AT SANTA BARBARA, CALIF.



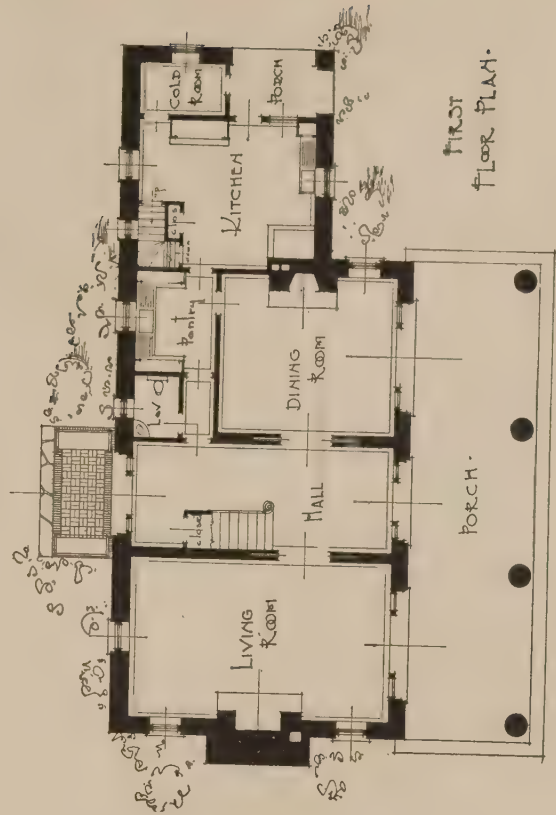
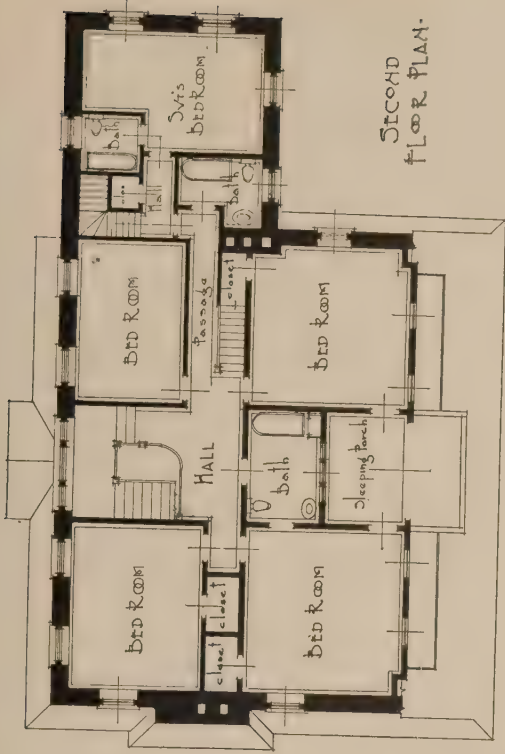
SECOND FLOOR PLAN.

E. W. Neff, Architect.

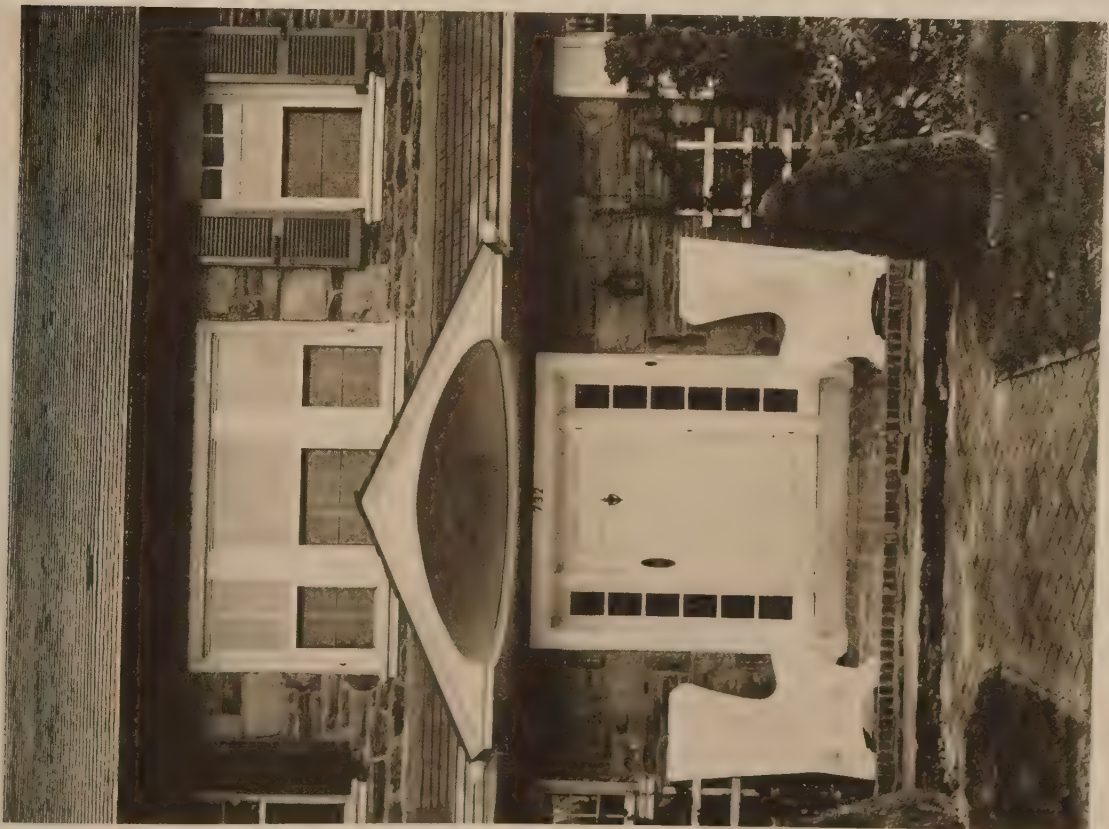


HOUSE AT GERMANTOWN, PHILADELPHIA, PA.

Carl A. Ziegler, Architect.



Carl A. Ziegler, Architect.



New Materials in Small-House Construction

From an Address by Leslie H. Allen of Fred. T. Ley & Co.

THE principal new materials used recently for wall construction are concrete blocks, tile, monolithic concrete, unit concrete, frame and stucco, and gunite.

None of these materials is exactly new, but they have not come into general acceptance. Some features of them will be new to many of those who are studying these problems.

The tile wall has been used in many places, the best jobs being of tile construction covered with Portland-cement stucco on the outside and plaster on the inside. Such a wall is not wholly satisfactory, as it does not give a perfect insulation to the interior of the house. In order to insure good insulation the inside has to be furred and lathed before plastering, and the extra cost of doing this is sufficient to wipe out its advantages. Further advance in tile construction has been the burning of tile with a surface or texture that does not have to be covered with plaster. Various forms of tapestry textures have been used for this purpose. This is slightly less expensive.

Although concrete blocks have been used largely for cellar-wall construction, they have not been used very much for superstructures. The average concrete block is porous and not satisfactory for the walls of dwelling-houses. A steam-cured or a wet-process block is much denser and practically waterproof, and, if furred and plastered on the inside, makes a satisfactory wall. Construction of this kind has been used in Morgan Park, Duluth, and the rebuilding of Halifax, Nova Scotia, with marked success. The concrete block being a large unit is difficult to treat architecturally in the design of a small house, but some of the work above referred to has shown that this block has been satisfactory.

The "Hydro-Stone" concrete block used at Halifax is a steam-cured wet block, made under pressure, and gives satisfactory results. It has a continuous air-space, but the insulation is not perfect, and it is doubtful if this method would be perfectly satisfactory unless furring and lathing are used with the plastering.

A good deal of attention has been given the last few years to the building of small houses in monolithic concrete. A large number of patented systems have been introduced by enthusiastic inventors, but very few of these systems have appealed sufficiently to the average contractor to make him desire to use them. Most of the monolithic houses built have been built by employers of labor in large factories, who, familiar with the possibilities of reinforced concrete in factory construction, have desired to see its advantages worked out in dwelling-house construction. Two or three of the systems now on the market enable concrete walls to be built for a price slightly exceeding frame construction, and one system gives a hollow concrete wall with a continuous air-space and perfect insulation that compares very favorably in cost with any other method of construction, and in this case the lathing can be omitted for interior plastering.

No way yet has been found of producing satisfactory surface for concrete walls in houses of this kind, and all the successful developments, so far, have been covered with Portland-cement stucco.

In several cases cinder concrete has been used instead of the usual concrete with stone for aggregate. Where cinders are used they should be hard, well burned, and well screened—and under such conditions have proved quite successful and economical.

Stucco has been used in very many cases where frame

construction was still desired but a more permanent outside covering was wanted. A frame house covered with stucco needs to be exceedingly well braced in order to secure a satisfactory result. A good many unsatisfactory jobs in stucco are traced to the use of wood lath instead of wire lath, and many more to a lack of understanding on the part of workmen in the proper methods of mixing and applying Portland-cement stucco. Two companies have recently put on the market a preparation of stucco in which magnesite forms the base instead of Portland cement, and this material, though more expensive in first cost, is more easily applied, and, being absolutely waterproof, can be used with a wood lath with satisfactory results. Wood lath in combination with tar paper, known as "Bishopric Board," has been successfully used with this form of stucco without requiring sheathing underneath, and, provided the framing is properly braced, this form of wall covering is no more expensive than shingles or clapboard and has the advantage of not needing periodical painting.

Portland-cement stucco shot with a cement gun onto wire lath is another method of covering the outside of house walls. It has been used in two or three places with success. The difficulties attending the use of the cement gun are such that it is not probable that this method of placing stucco will come into general use.

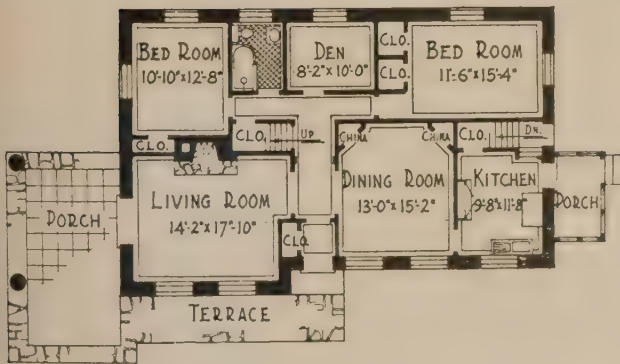
The use of adobe, sun-dried brick in parts of California is of interest. Where climate permits this is an economical wall material for one-story structures.

The standard roof covering in country districts of wood shingle bids fair to be soon supplanted by the asphalted felt shingle with slate coating. These shingles are made of a heavy felt saturated with asphalt with crushed slate rolled top surface, and can be purchased singly or in strips of four or in rolls (the best method is apparently the strips of four). These shingles are undoubtedly fire-resisting to a greater extent than the wood shingle, although they cannot be classed as fireproof. The lighter weights have a tendency to curl up, and the slate surface is liable to wash off some of the poorer makes. The heavier makes of asphalted felt shingles, made with a good quality of asphalt, appear to be perfectly satisfactory, although until they are tested by the lapse of time it cannot be stated with certainty that these will be as durable as the wood shingle.

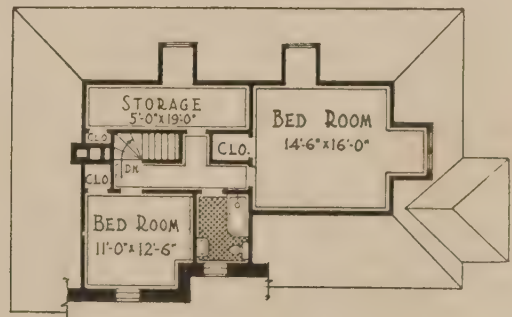
It is not generally known that the cheaper grades of slate cost very little more than felt or wood shingles. Probably the reluctance of the small contractor to introduce another trade (the slater) into the building of a house has hindered the use of this kind of roof. We have used this slate roofing (sea-green slate) on many recent housing jobs, at an extra cost not exceeding fifty dollars per house, to the great surprise and extreme satisfaction of the owners.

The asbestos slate (not to be confounded with the asphalted felt shingle) is somewhat more expensive, comparing more nearly in cost with the better grade of slate. It seems to be difficult to get a satisfactory color in this material; but apart from this, they seem to be entirely satisfactory.

In the framing of floors there is very little change to report. Some firms are attempting to introduce so-called "metal lumber" (joists made of pressed steel) to replace wood-joist construction. The cost, however, is considerably in excess of wood construction, but this method has been used in apartment-houses that, under the building laws, were required to be built of fireproof construction.



FIRST FLOOR PLAN



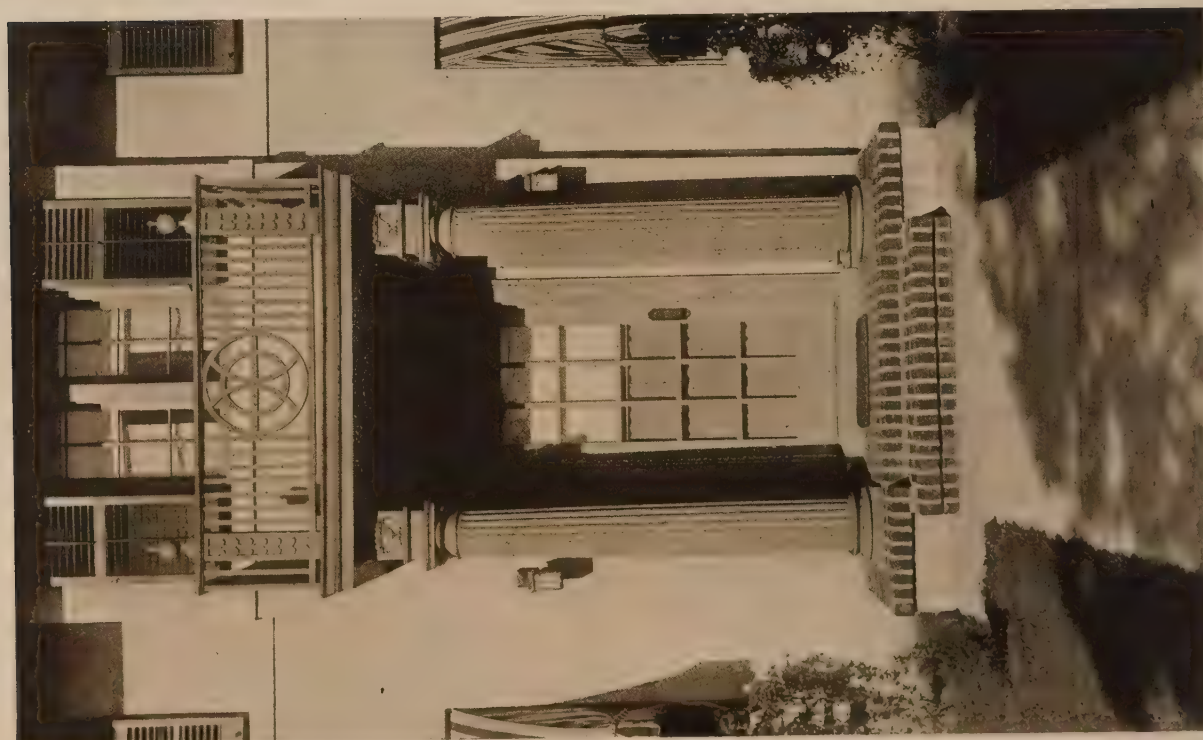
SECOND FLOOR PLAN

HOUSE, ROBERT L. BEATTY, NARBERTH, PA.

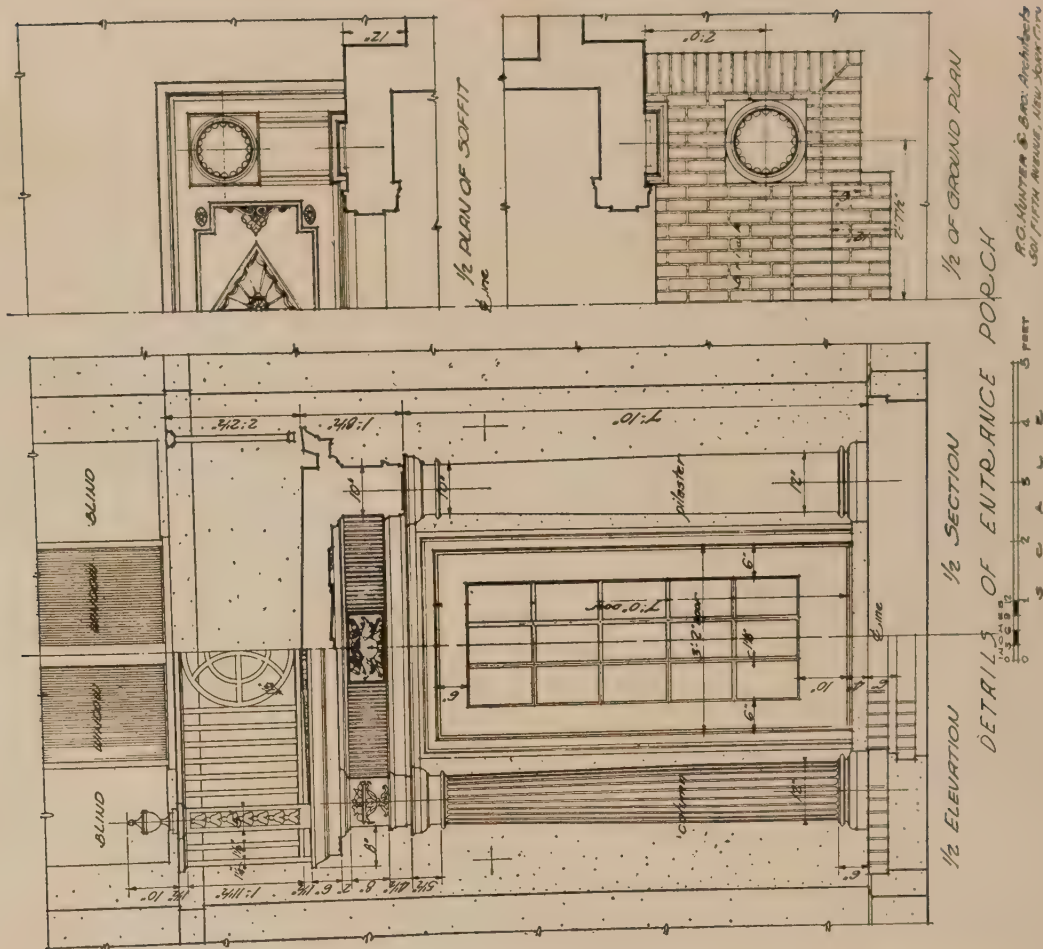
Wallace & Warner, Architects.

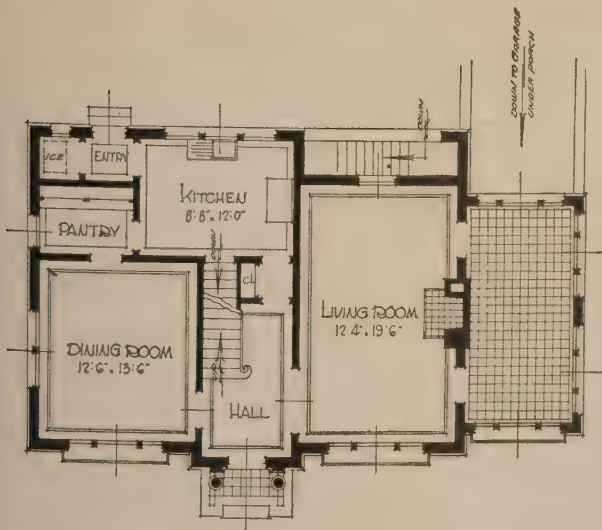
One of the items that adds considerably to the cost of a house and delays its progress is the interior plastering. The bringing in of wet plaster into a house, especially in winter and spring time, is a disagreeable job, and adds considerably to the difficulty of completing the house, and any substitute for plastering that would prove entirely satisfactory would be welcomed everywhere. Various forms of wall-board are on the market for this purpose. It has been found, however, that the wall-boards made of wood-pulp are not satisfactory

for permanent construction. There are, however, two makes of gypsum wall-board on the market. These are formed of gypsum about $\frac{1}{4}$ inch to $\frac{3}{8}$ inch thick, covered on both sides with a heavy well-sized paper. One of the firms putting this wall-board on the market has patented a rounded edge-board which allows of a plaster joint to be run, giving a perfectly flat surface suitable for painting or papering. We have used this on several houses with satisfaction and considerable saving in expense.

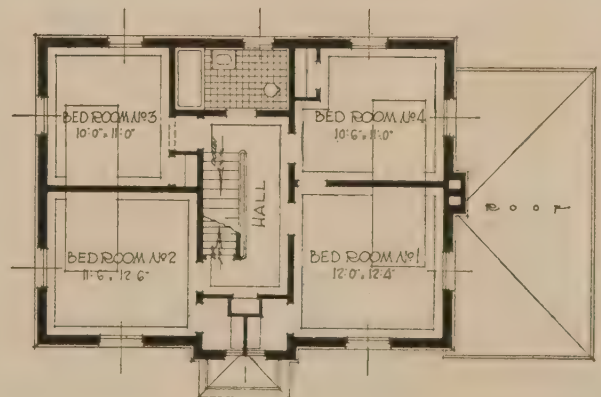


HOUSE, G. R. STEINERT, HACKENSACK, N. J.





FIRST FLOOR PLAN



SECOND FLOOR PLAN

Construction of the Small House

By *H. Vandervoort Walsh*

Instructor in Architecture, School of Architecture, Columbia University

ARTICLE IX

ESSENTIAL FEATURES OF GOOD PLUMBING

THE PROBLEM

THERE are three things which will affect the plumbing system of the small house; namely, the existence or non-existence of municipal plumbing codes under which the structure is erected, the existence or non-existence of a public sewer, and, finally, the type of water-supply, whether it is public or private.

If there are no plumbing codes to follow, it is sometimes possible to save money on the plumbing; but unless the specifications are very rigid, there is danger of poor work being installed. By saving money is not meant installing cheap material, but eliminating certain features which most plumbing codes require and which are not essential in producing the best possible type of plumbing system. For example, in most cities the ordinary traps which are required under each fixture to prevent the sewer-gas from returning into the air of the house, after the waste water has drained out, must be equipped with back-vent pipes in order to eliminate dangers of siphonage. The cheap S trap without this back-venting will siphon out, that is, loose its water-seal by atmospheric pressure pushing the water out of the trap in its attempt to fill a vacuum created by the discharge from a water-closet on the floor above. By back-venting these traps, as shown in Figure II, this danger of siphonage is reduced, and, therefore, most codes have adopted this regulation requiring back-venting. But today the market offers certain traps which are claimed to be non-siphonable and which do not require this back-venting, with the consequent result of reducing the cost of the equipment. Most plumbing codes have not changed their old regulations, for many authorities do not yet believe in the possibility of a non-siphonable trap, and so require the use of the back-venting system. Consequently, wherever the small house is constructed within the jurisdiction of these laws, the plumbing will cost more than where the non-siphonable trap can be used without the elaborate system of back-venting.

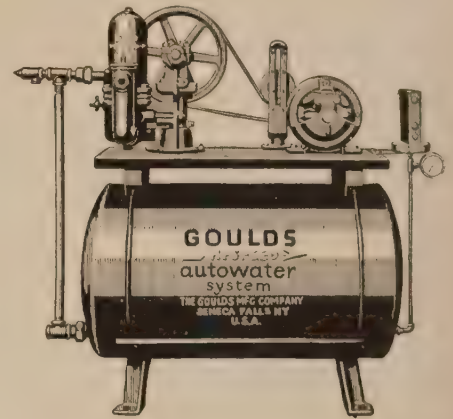
Likewise, wherever there is a public sewer, the problem of sewage disposal is simple and cheap; but if the house is not located near any such public convenience, special methods must be designed for the destruction of the waste matter. The best type of such devices is the septic tank with the small subsurface irrigation tile, through which the partially purified material from the septic tank is distributed under the ground for complete purification by air and bacteria. The other method of disposal—pouring the sewage into a cesspool—is to be deplored, unless there is possibility of an early construction of a public sewer, and no drinking-water is secured from the premises.

The third consideration which affects the plumbing system of the small house is whether it can draw upon a public water-supply, or whether it must secure its private supply from a well or a near-by stream or lake. A private source of supply generally means the erection of a storage

tank. The best type of tank for this purpose is the pneumatic tank, which is installed in the cellar, and not in the attic, as with the old-fashioned tank. The water is pumped into this tank, and the air which filled it is trapped by it, so that the more water that is pumped into the tank, the more compressed becomes the air. This cushion of air gives enough pressure to force the water to any fixture in the house.

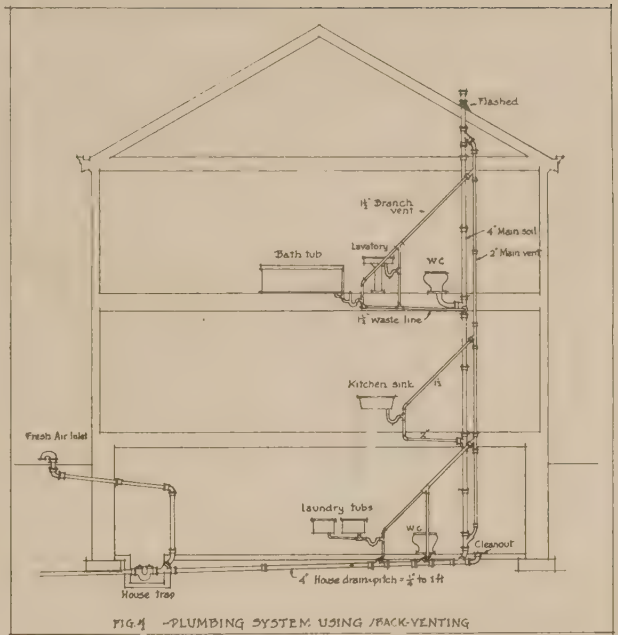
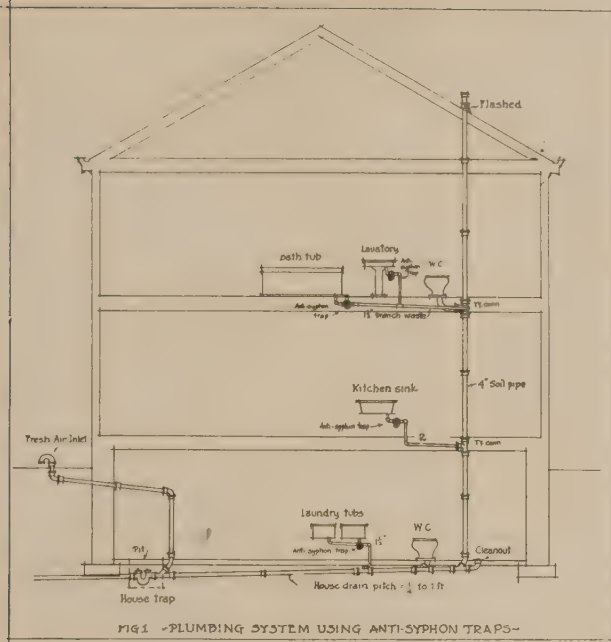
SIMPLEST TYPE OF DRAINAGE SYSTEM

In Figure I is represented the simplest type of drainage system that can be installed in the small house, but



Speed autowater system. Capacity, 180 gallons per hour for pressure of 43 pounds or elevation of 100 feet.

since it uses non-siphonable traps and no back-venting, it will not be possible to make use of it in all cities or towns which have plumbing rules prohibiting it. The average small house does not have room for more than one bath, a kitchen-sink, a set of laundry-tubs, and a toilet for the servant, generally placed in the cellar. For purposes of economy, it is essential to place all of these fixtures on the same main soil-line, which extends vertically from the house-drain in the cellar through the roof. If the bathroom is so located that the vertical line which serves its fixtures cannot serve the kitchen-sink or the laundry-tubs, then a special waste-line must be carried up and through the roof, which is extravagant of material. As this waste-line will be only 2 inches in diameter, it is necessary to increase its diameter to 4 inches before projecting it from the roof, since it may become clogged in the winter with frost. But the main soil-line is 4 inches in diameter and needs no increase on it. The main-house drain is also made 4 inches in diameter, and is generally laid under the cellar floor with a pitch of $\frac{1}{4}$ inch to the foot. At the junction of the vertical soil-line with it, and also at any other point where there is a marked change in direction, the house-drain should be equipped with clean-out holes, covered with brass screw-caps. Just where the house-drain leaves the house a house-trap is installed, and back of this a fresh-air inlet to permit the circulation of air in the system. The foundations should be arched over the house-drain where it passes through them, so that any settlement of the masonry will not come upon the pipe and cause it to be broken.



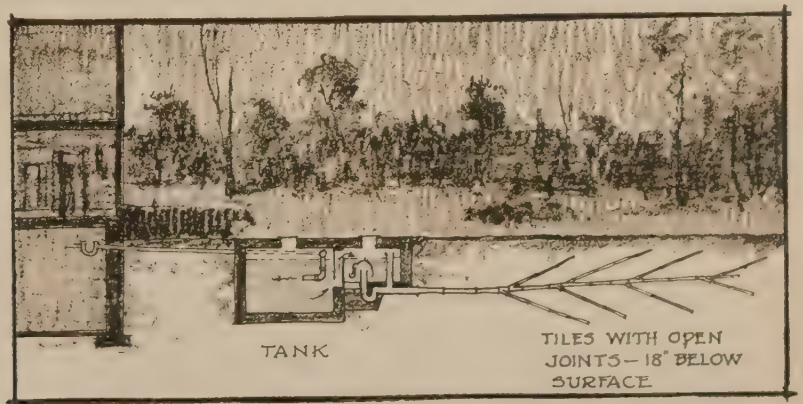
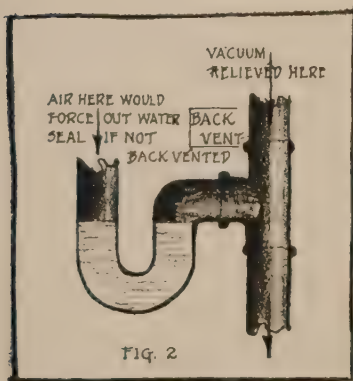
The material of which the house-drain, soil-line, and waste-line are made is usually cast iron, and of a grade known as extra heavy. The joints are the bell-and-spigot type, which are stuffed with oakum and then closed tight with 12 ounces of fine, soft pig lead for each inch in diameter of the pipe. Branches are usually of galvanized wrought iron or lead, but lead is limited in length and is not considered very good, although the term plumbing originated from the Latin word for lead. The common limitations upon the length of branches of lead pipe are: 8 feet for 1½-inch pipe, 5 feet for 2-inch pipe, 2 feet for 3-inch pipe, 2 feet for 4-inch pipe. The parts of the branch pipes which are visible are generally made of brass nickel-plated. The joints between lead pipe and lead pipe, and between lead pipe and brass pipe, are made by the common wiped joint. Joints between lead pipe and cast-iron pipe are made by first wiping the lead pipe to a brass ferrule and then stuffing and caulking this into the cast-iron pipe. The joints between wrought-iron pipes are made with the screw joint, and between wrought iron and cast iron with the screw joint, but inserting into the cast-iron pipe a section of malleable cast iron which has been threaded.

The usual sizes for branch wastes from the fixtures

are as follows: for water-closets 4 inches, for bathroom-tubs 1½ inches, for lavatories 1½ inches, for kitchen-sinks 2 inches, for laundry-tubs 1½ inches, and when in sets of three 2 inches. The size of the waste from the bathroom-tub can be increased to 2 inches with great advantage, if the additional slight expense is not objectionable.

The vertical soil-lines should be supported at each floor by metal straps placed under the hub and fastened to the floor-joists. It is very important to properly flash the base of the projecting portion of the soil-line above the roof. Wherever the branch soil-line to the water-closet is connected, a short TY connection may be employed in order to avoid the projection of the parts of the pipe beyond the plane of the ceiling in the floor below. However, no short TY connections should be made in any horizontal pipes.

A very important economical consideration should be noted in laying out the arrangement of the bathroom fixtures in this connection. The horizontal branch soil-lines and waste-lines must be carried through the floor construction, and they should be so arranged that they can run parallel with the floor-joists; otherwise deep cuts will have to be made in them. In the case of the branch soil-line it is essential to place the water-closet as near to the main soil-



stack as possible, for with a 4-inch pipe the joists must be framed around it rather than be cut, since so deep a gouge would weaken too much the strength of them. A similar consideration must be given to the framing in stud partitions which are bearing the loads of the floors above, for too deep cuts in them, to allow for the passage of pipes, will weaken them greatly. In this connection it ought to be noted that an ordinary 4-inch soil-pipe cannot be carried in a stud partition made with 2 x 4 studs, since the outer edges of the joints of the pipe will project beyond the face of the plaster, and for this reason some convenient place should be planned for them in closets, or 2 x 6 studs should be used in the partition through which they are run.

THE MORE COMPLICATED BACK-VENT SYSTEM

The essential parts of the plumbing system remain the same as described above, but each trap is considered to be siphonable, and must be prevented from loosing its water-seal by this action through the use of back-venting pipes. Whenever, then, there is an unusual amount of semivacuum created in the pipes by the discharge of some fixture above, the outside air-pressure can relieve it by passing through the back vents rather than by forcing out the water-seal in the traps. The usual type of trap employed is the modified S trap with the small TY connection to give what is known as continuous venting. Formerly the vent was taken off from the crown of the three-quarter-S trap, which applied the air too near the surface, causing excessive evaporation and, due to its position, danger of clogging, but with the continuous system of venting, the waste-pipe appears as a continuation of the vent-line, and the trap enters into its side through a TY fitting.

The size of traps should conform to the size of waste-pipes, and usually the size of the branch vents is about the same size as the waste-lines. However, there are special conditions where this varies. For venting the water-closet trap, it should be noted that the vent is not taken from the trap which is contained within the fixture itself, but is taken from the upper side of the bend (usually of lead) where the fixture is joined with the piping system, and is 2 inches in diameter.

Where there are two fixtures, such as the lavatory and the bathtub, with 1½-inch branch vents coming from the traps, these may be joined into one main branch vent, which need not be more than 1½ inches in diameter. The pitch of the branch vents entering into the main vent should be at an angle of about 45 degrees, so that all rust scale will drop down into the fixture outlet and be washed away.

The main vent, which runs parallel with the main soil-line, needs to be only 2 inches in diameter, and should be branched in at the bottom and the top to the main soil-line, as shown in the drawings. The material of which both main vent and branch vent is made should be galvanized-iron piping.

The fresh-air inlet, the house-trap, the clean-outs, and all other parts of the system are the same as was shown for the simpler method of plumbing.

RAIN-WATER DRAINAGE

The small house need not drain off its roof-water into the plumbing system, if the plumbing code does not require it. The simplest and easiest method to dispose of it is to collect the water in gutters and lead it down the water-spouts into pipes which terminate in a dry well in the ground. Small roofs over porches and back doors need not even have the leaders, but spill the roof-water out onto the ground where a stone has been placed to prevent the undermining of the

surface of the lawn by the wearing action of the water stream.

In outlying city districts where the sewers have not yet been installed it is customary to carry the roof-water in pipes below the level of the sidewalk to the gutters of the street, or to a leaching cesspool which is independent of the cesspool used for sewage disposal, and which is practically the same thing as a dry well, for the bottom is made with gravel through which the rain-water seeps off into the surrounding soil.

Wherever the rain-leaders must be connected to the drainage system of the house, the sheet-metal leaders are inserted into cast-iron pipes called shoes at the base, which in turn are trapped on the inside of the cellar wall and connected with the house-drain. It is always best to try to trap a group of leaders to one trap rather than use a separate trap for each leader.

TESTS AND PRECAUTIONS

There is nothing very complicated in the plumbing system of the small house. Certain sanitary precautions should be observed in arranging lines, however. For example, the termination of the main soil-line should not occur near a dormer or other window, nor should the termination of the fresh-air inlet be located in the cellar wall under a door or window. The system when completed in the roughed-in form should be tested for leakage by filling it with water, and when all the fixtures are connected and every part of the system is supposed to be in working order, either the peppermint or the smoke test should be used to detect any further possible leakage. The peppermint test consists in pouring hot water and 2 ounces of oil of peppermint into the top of the system from the roof, after all the fixture traps have been filled with water, and then detecting with the nose where the leaks are. If the smoke test is employed, a smoke machine is best. Old oily rags and tar paper are burned in the machine, which has its flue connected with the fresh-air inlet, and the smoke is pumped through the system until it appears escaping from the soil-line extension on the roof. If there are any leaks, the odor and the smoke stain will attract attention to them, and if the water-closet traps in the bowls are defective, the yellow stain of the smoke will make it very evident.

REFRIGERATOR CONNECTIONS

The drainage from the refrigerator should never be directly connected with the drainage system of the house. If the plumbing code requires any connection at all, the usual arrangement is to drip the ice-box water into a lead-lined tray which has a pipe at least 1¼ inches in diameter that carries the water down to the laundry-tubs in the cellar and spills it into them. On the other hand, if there are no plumbing regulations, it is best to drain this water off into a small hole in the ground into which has been thrown gravel, and this will permit the water to soak into the surrounding soil.

WATER-SUPPLY PIPES

If there is a city supply of water, the small house should have a main supply-line from the water-main in the street of at least ¾-inch diameter, but this does not give the service that a larger pipe, say a 1¼-inch pipe, does, for often with the smaller pipe, if the water is being drawn in the kitchen, none will be secured from the faucets in the second-floor bathroom. The kitchen-sink should have a service pipe of at least ¾ inch, the tubs the same, and the lavatory ½ inch.

(Continued on page 158.)



FIRST FLOOR PLAN

DESIGNED BY
MR. CARL G. FISHER
BASS KNOWLTON & COMPANY, ARCHITECTS
220 MADISON STREET

(Continued from page 156.)

All service-lines should be compact and as direct as possible, and long horizontal runs under floors should be avoided. Hot-water supply-lines should be kept at least 6 inches from cold-water lines. There should be a shut-off at the entrance of the supply-line to the house, at the base of all vertical risers, and under each fixture. To avoid water hammer, it is best to take all faucets off the sides of the termination of pipes, rather than from the ends, for in this way an air-cushion can form, relieving the pounding action of the water in the pipes.

Supply-lines should never be run in the corners of buildings where they are in danger of freezing, and they should be kept out of the exterior walls of houses as much as possible for the same reasons. The packing of pipes where they pass through the floors will often prevent freezing caused by cold drafts around them.

HOT-WATER SUPPLY

It is generally accepted to-day that the most convenient method of securing hot water in the small house is with the instantaneous type of gas-heater, connected with a boiler for storage purposes, but capable of delivering water directly into the pipes without passage through the boiler, when a sudden demand is made upon it. These gas-heaters have a system of Bunsen burners which heat the water as it passes through a series of copper coils, and generally the water is warmed to a temperature of 100 degrees in one passage. They are automatically controlled, so that when the temperature of the water goes below a certain fixed standard the gas-burner is lighted by a small pilot-light until the proper temperature is reached, when it is shut off again.

Although these heaters are arranged to deliver hot water directly from the coils, yet if they had no boiler to store up the water, much larger heaters would be required than necessary. For storage purposes, then, a 40-gallon boiler is satisfactory for a residence with one bath and one kitchen, and if there are two baths a 50-gallon boiler is needed. The usual location of the boiler and heater is in the cellar.

However, where there is no gas to be used, the coal-heater must be employed—either the tank-heater or the water-back in the kitchen-range. The latter was the usual old-fashioned method of heating the water, and the boiler was located alongside of the kitchen-range. The size of the water-back was proportioned on the basis of 2 square inches of heating surface to each gallon storage capacity in the boiler. The tank-heater is a special coal-burning stove, designed for both serving as an iron-warmer and a water-heater, being usually placed in the laundry in the cellar. Another method of securing hot water, which is not recommended, is to place heating coils in the furnace. This obstructs the fire-pot, chills the fire, overheats the water in cold weather and underheats it in warm weather, and does not operate at all during the summer.

FIXTURES

The modern bathroom fixture may be made of one of three materials: true porcelain, earthenware, or enamelled iron. The true porcelain fixtures are the heaviest, the most durable, and the most expensive. The material is non-absorbent and white in color, and the surface presents a gloss which is in reality a form of glass. When it is chipped, the fracture shows the material below as white, and a drop of ink will not be absorbed by it.

In imitation of the porcelain fixture are made earthenware ones, but which are in no way to be compared to the



Gas water-heater.

true porcelain, although a casual glance at them would lead one to think that they were porcelain fixtures. However, a chip from the surface will reveal the yellow and porous texture of the earthenware below the glazed surface. The glossy white surface in time stains and becomes covered with small hair-cracks, unlike the porcelain fixtures, and for this reason they are not as sanitary nor as durable. They are cheaper than the true porcelain fixtures, but this material should be avoided in water-closet bowls, but is admissible for use in tubs and lavatories.

The enamelled-iron fixtures are considered

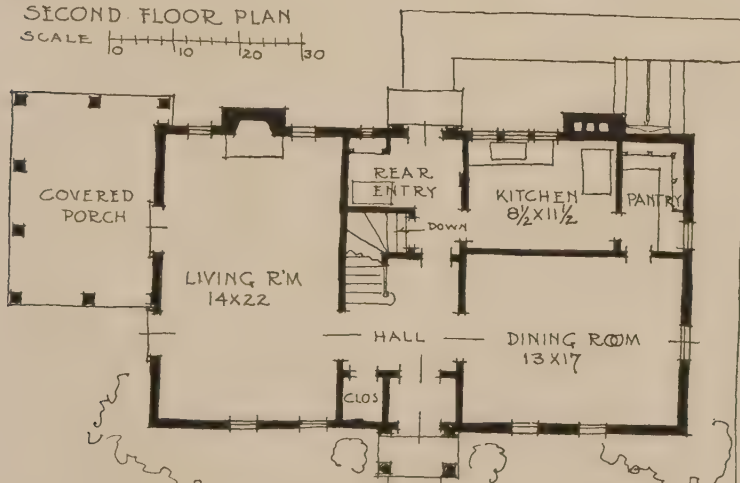
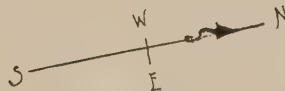
by most to be superior to the earthenware fixtures, since they do not craze, are lighter, and generally more durable. The quality of this ware can be judged by the absence of roughness, blisters, bubbles, and spots, and freedom from hair-cracks and peeling. Bathtubs of the modern type made of enamelled iron have the rich appearance of porcelain fixtures, since the sides are also covered with enamel, unlike the old-fashioned types, which had the interiors lined with the enamel and the exteriors painted with white paint.

The mechanical operation of the various fixtures is so well standardized that not much choice is given between the catalogue of one firm and another. The best type of water-closets are the siphon, the siphon-jet, and the converging jets, the latter being a more modern development, which has eliminated the noise of the siphon action and yet which accomplishes a quick and rapid flushing action. The lavatories which are most commonly specified are of the pedestal type, although the modern tendency in sanitary bathroom design is to eliminate as far as possible all junction of fixtures with the floor, for it is here that dirt and stains develop. Such arrangements carried to the extreme would require a sun bathtub, a lavatory without legs, and special compartment for the water-closet, but this would be absurd for the small house. However, the built-in bathtub is far superior to the old-fashioned tub which stood upon legs, and under which all manner of dirt could collect.

We often hear the remark that no wonder the cost of living to-day is so much higher than it was with our ancestors, who knew nothing about the clean, tile-lined bathrooms with porcelain tubs, white and glistening lavatories with all the cold and hot water needed, while in the old days the wooden tub, set up in the kitchen near the range, was good enough for the Saturday-night bath, and the tin pan, filled under the hand-pump outside on the back porch, was good enough to wash the hands in each morning. But although the modern bathroom and the modern plumbing system is an economic burden to the small house, it is doubtful if we shall ever see the day when it is abolished in order to cut down on the cost.



SECOND FLOOR PLAN
SCALE 10 10 20 30



FIRST FLOOR PLAN
SCALE 0 5 10 15 20 25 FEET

NOTE - TWO BEDROOMS ON THIRD FLOOR

HOUSE #7 FOR C. E. TRENHOLM - STONE ESTATE
STANLEY B. PARKER ARCHITECT BOSTON - (T 7)

A Housing Operation in Hartford, Connecticut



Zion Street tract. Developed by Hartford Home Building Association, Inc.

THROUGH the initiative of local manufacturers and business men working through the Hartford Chamber of Commerce there has been brought about the largest single home-building project that the city has ever known. Estimating the average family at five persons, the results attained in the construction of two hundred and one houses will accommodate about a thousand persons, and the success of this experiment will, doubtless, inspire the completion of the entire building programme, with further expansion as conditions necessitate.

Hartford's experience with the problem of an increasing population and a decreasing supply of rentable houses has been unique. In the first place, other cities turned their factories to war products that were more temporary than Hartford's. Few cities made their peace-time readjustment with the minimum of friction and delay that obtained there. There was no outpouring of workers when the war ended. There was no great strike to drive them away. The soldiers flowed back and the workers remained and they all clamored to be housed. The problem was acute.

During the winter of 1919-20 the Housing Committee

of the Chamber of Commerce held frequent meetings and secured statistics of the building operations in progress during the preceding spring, summer, and fall. On the recommendation of the committee the directors formed a corporation known as the Hartford Home Building Association, Inc., and capitalized at \$1,500,000, subscribed by one hundred and ten representative firms, including every branch of the city's business life. During this time building costs had risen far above 1914 figures. Land was purchased in different sections of the city, specifications issued, and contracts let.

The most advanced site is the one developed at the Zion Street tract. The bulk of houses built are six-room. They are built in pairs, separated by a brick fire-wall, independent flues, cellars concreted and subdrained, slate roofs and hardwood floors, high-grade plumbing and electric lighting, hot-air furnaces, set tubs in the basement, gas-range and hot-water heater in the kitchen, screens and shades complete. A few houses facing on Zion Street are brick veneer; the balance are either stucco, clapboards, or shingle finish.

Need of Better Lighting in Country Homes

THE New York State Health Department has found that while 21 per cent of country school children have defective vision, only 5 per cent of city school children are so afflicted. One might naturally expect the reverse to be true. The smoky atmosphere, the tall buildings, and the lack of sunlight in many interior rooms in cities often make artificial light necessary during many hours of the day. For all that, investigation has revealed the fact that city school children in general have stronger eyes than do those in the country, probably because of the superior lighting which city school children enjoy in their homes. But poor lighting conditions need not obtain for the rural family. Very good lighting can be secured from practically every kind of illuminant if proper attention is given to the subject. The result will be fewer headaches and stronger eyes.

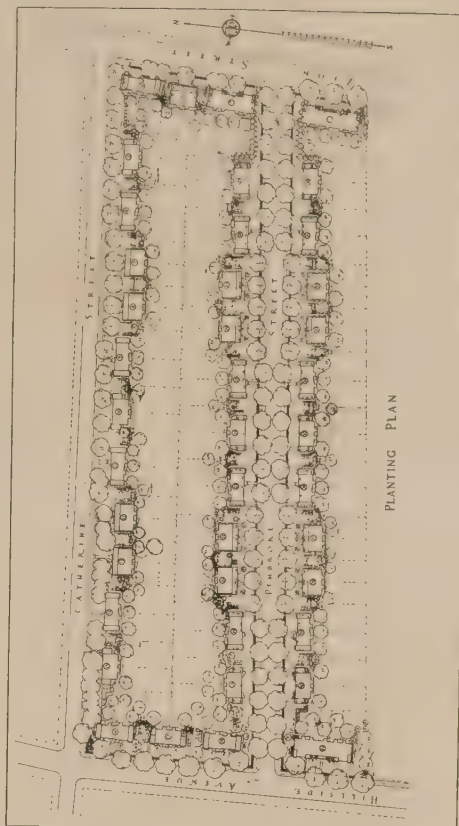
There is a growing realization of the fact that good illumination is as much a necessity as are pure water, fresh air, and proper sanitation, and that the effect of poor lighting, whether natural or artificial, reacts strongly on the health. Poor light makes for neglect of cleanliness, for what is not clearly seen will not be thoroughly cleansed. Poor light

increases the strain from forms of work that tax the eyes and thus makes the work more difficult. Nor can we ignore the effect of nervous depression upon even normally healthy persons when working for long hours amid gloomy surroundings. They become morose and their health eventually suffers. In the treatment given in the best modern sanatoria great stress is laid upon the value of abundant sunlight.

The country home should be well lighted not only because light safeguards the eyes but because a well-lighted home is attractive and fosters a cheerful disposition. Proper attention paid to the lighting of a home may help solve the problem of keeping young men and women on the farm. Just as a moth is attracted by the light of a candle, so young people are drawn by good lighting. Abundant light in their own homes where they may read in comfort, or play games, will contribute largely to their staying at home evenings. The depressing atmosphere of many a dimly lighted country home has no doubt been a substantial factor in driving its young people to seek residence in the brightly lighted towns and cities.



HOUSE No. 2. FOUR-FAMILY GROUP.



PLANTING PLAN

D. S. Douglass, Architect.

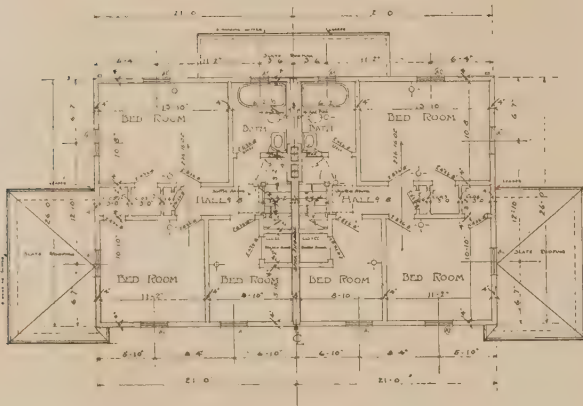
ZION STREET TRACT, HARTFORD HOME BUILDING ASSOCIATION, HARTFORD, CONN.



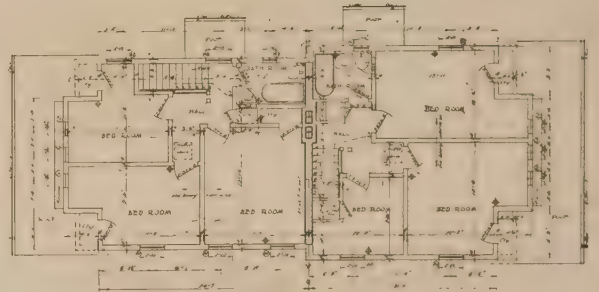
HOUSE No. 1. FIVE-FAMILY GROUP.



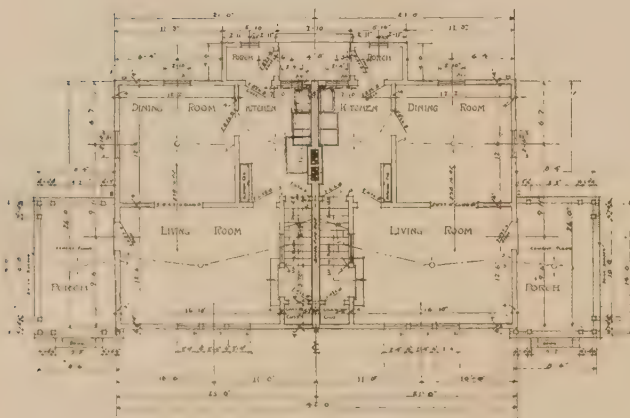
HOUSE No. 3. TWO-FAMILY GROUP.



SECOND FLOOR PLAN

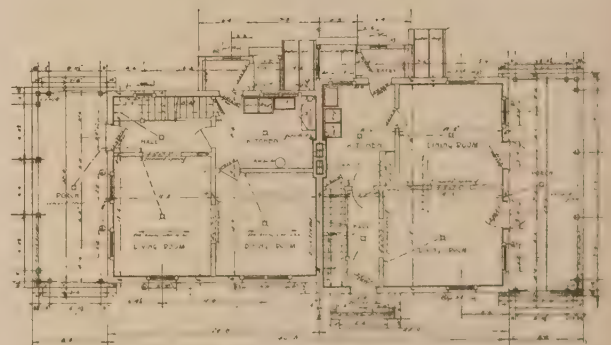


12 PLAN OF SECOND FLOOR 13



FIRST FLOOR PLAN

PLAN, TYPE H-HR.



14 PLAN OF FIRST FLOOR 15

PLAN, TYPE DR-ER.

TWO-FAMILY GROUP

ZION STREET TRACT, HARTFORD HOME BUILDING ASSOCIATION, HARTFORD, CONN.

D. S. Douglass, Architect



D. S. Douglass, Architect.



TYPES OF TWO-FAMILY GROUP.

ZION STREET TRACT, HARTFORD HOME BUILDING ASSOCIATION, HARTFORD, CONN.

The Corinthian Order

By Egerton Swartwout

IN making the model the modeller should turn the outline of the leaves with a revolving template; it is useless to turn the bell and apply the leaves to it. As I have said, the bell exists only in principle; it is the outline of the leaves that counts. I have already explained the principle governing the detail of the leaves; if that principle is followed the detail can be what you like, but generally the stiff, formal, regular leaf looks better than the freely modelled one. The principal thing is the shape and outline and the lip at the top. This last is very important; if it is too large and fat it becomes entirely too prominent and cuts up the cap badly in the sunlight. Of course on the scale model all the detail of the leaves need not be shown, but the shape and outline and the size of lip should be carefully studied; the volutes and the abacus should be carefully modelled and their projection altered until the outline is exactly right. It is extremely important that there should be no confusion on the finished model; every detail should play its rational part, so that the cap can be easily read at a distance. If it can be, it is a good cap, no matter what the detail is, provided the outline is good; but if it is confused and shapeless, it is a failure, no matter how beautiful may be the detail. I venture to say that for one good cap there are one hundred poor ones. Nor can it be taken for granted that all the classic examples are good. Their average was undoubtedly higher than ours because they gave more attention to detail than we do; but there were some that must have been badly confused, if we can judge from the restorations. In their present state, unless, indeed, they are too badly mutilated, they probably look better than they did when they were completed. This is a point which I will take up later in connection with the entablature.

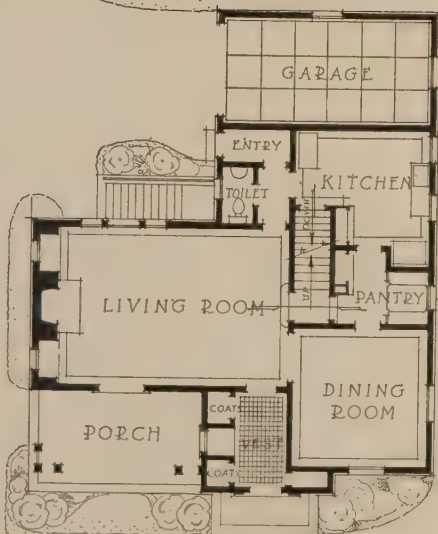
Reverting to the model of the cap: The use of the large-scale model is then to study the outline of the cap and the relative size and importance of the details with a completeness that is impossible in a fragmentary portion of a large cap. I need not add in this connection that the scale model must be a complete cap finished on all sides, or at least on three sides. This scale model, accurately cast, with an exact axis through it, forms the basis of the large full-size model. If it is, say, at $\frac{3}{4}$ full size it may not be necessary to make a complete full-size model if the work is to be carved by competent men. (It is presupposed that the final form of the cap is in stone, but naturally the same principles will apply to any material with proper regard, of course, to its limitations.) Fragmentary models could be made of the various parts, taking the size and projections, with Chinese fidelity from the small model. In fact, in whatever form the full-size model is made, it must be merely an enlargement of the scale model. It would be, in my opinion, much easier for the carvers to work from the small model than from the large one, particularly if one was a multiple of the other. The small model would not warp, and the measurements could be determined more accurately, and the fragmentary models could be used for the detail. I must admit here that I have never tried this method, that is to say, I have always made complete full-size models in addition to the scale models, but I have had so much trouble with measurements from large models that I feel this scheme is the better of the two.

One word more in regard to the leaves: It should be borne in mind that the leaves should always echo the form of the cap, whether it is a column or a pilaster. The large leaf at the corner of a pilaster, for instance, is naturally bent at right angles up as far as the lip. Now it is evident that the lip cannot be bent at right angles, nor at the same time should it be on a 45-degree line to the front and sides of the pilaster. I am now speaking of the line of the face of the lip. I have noticed an example lately where this was done to a very pronounced degree, and the effect was very bad. The lip of the corner leaf and of the leaf above it under the volute were very prominent—too prominent entirely to my way of thinking—and the 45-degree line formed by these lips was very disturbing. The leaf under the volute can be divided; in fact, it usually is so treated, and half could come under each side of the volute; but the lip of the corner leaf below has to be humored, and more nearly bent at right angles than on the 45-degree line.

The entablature of the Corinthian order differs chiefly from that of the other orders in that the cornice is greatly increased in importance; in fact, the cornice is as much the most important feature in the Corinthian as the frieze is in the Doric and Ionic. In their endeavor to make the cornice the real crowning feature, it is probable the Romans went too far; the cornice is a wonderful conception, but the projection is excessive, generally, when seen across the corner. It is apt to detach itself a little from the frieze and architrave below it. This excessive projection is particularly noticeable on a pediment; the fact that the corona does not carry across the pediment but is used only on the rake seems to accent the projection. Few if any of the classic works are in a sufficiently preserved state to show this, but it is noticeable in the restorations, and is particularly evident in actual construction. I have noticed it often, and especially in one instance in which I know the classic example was accurately followed.

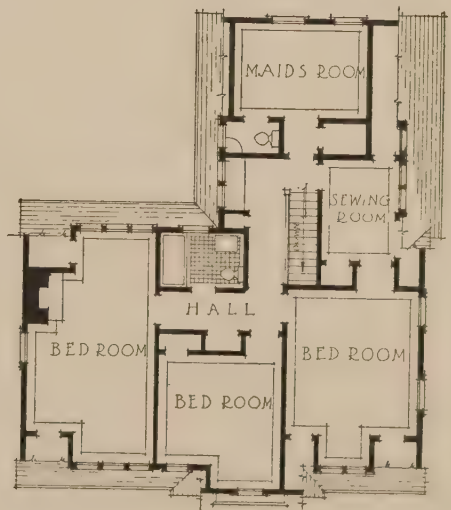
These classic examples are, of course, of infinite variety and of greatly varying proportions. The Roman architect allowed himself much more freedom than did the Greek. The general proportion of entablature to column remains quite constant, but the relation of the various parts of the entablature to each other is alike in no two cases, nor is the proportion of the brackets and dentils at all standardized. "Unfettered by the restrictions which the triglyphs placed upon the Greek architect, his Roman brother gave free rein to his fancy, and the abundance of slave labor made possible a wealth of detail that was denied to his less-powerful and less-opulent neighbor." This exuberance of detail has been the subject of much criticism by those writers who hold Greek as the only true classic architecture, and can see no good in any Roman work. It is perfectly true that compared to the Greek Doric the Corinthian seems unduly elaborate, but it is also true that the order as a whole is wonderfully harmonious, and that the wealth of detail of the entablature is the natural result of the elaboration of the cap. Just as the carved anthemion in the necking of the Erechtheion cap established the scale of the entire order, so the detail and scale of the Corinthian cap establish the scale and the amount of detail in the entablature. Here

(Continued on page 166.)



• FIRST FLOOR PLAN •

HOUSE FOR IRVIN HOME DEVELOPMENT CO., AKRON, OHIO.



• SECOND FLOOR PLAN •

Albert Houghton Good, Architect.

(Continued from page 164.)

again is a perfectly self-evident principle, so evident that it seems as if no one could possibly ignore it, and yet there are to be seen everywhere elaborately carved Corinthian caps upon plain shafts and surmounted by simple moulded entablatures. It is done so often that one almost loses sight of the incongruity of it. A Corinthian cap fully detailed calls for a shaft either fluted or in some material more elaborate than the rest of the order—highly veined marble or granite that by its richness or figuring will be in scale with the cap—and it also calls for an elaborately detailed entablature. I don't mean that it is always necessary to adhere to the modillions and dentils of Vignola; an entablature can be very elaborate and in perfect harmony with a Corinthian cap without either of them; the examples left by the Romans show us that, but if the order is to be used at all it must be used in a logical and harmonious manner.

And in this connection it is a curious fact which, so far as I know, has never been commented on, if indeed it has even been noticed, that many, if not all, of the Corinthian entablatures of the classic period are not in scale with themselves; that is to say, the dentils and modillions are really at a much larger scale than the rest of the ornament, except perhaps the ornament in the frieze. This statement may seem revolutionary, but I am sure it's true. I first noticed it some years ago when I was executing a large Corinthian order which I took straight from one of the most celebrated Roman orders. I had quite a time with that order. It was a portico in stone and at a very large scale. Following the advice of various critics and against my own better judgment, I gradually increased the diameter of the columns on the drawing until they were about 9 diameters high—even then I was told they were too weak, but I had them modelled that way at one-quarter full size. They did not look very well in the model, but I thought it was because of the unusual size; they looked like and were about the size of porch columns on a country house, and it was not until some months later I came to the conclusion the proportion was all wrong. By that time I could not experiment any longer, so I resolved to take the order of Jupiter Stator as straight as I could, being influenced not only by my admiration for it but also by the fact that the height of my columns was within an inch or two of the actual height of the classic example. Of course no two books of reference agreed on the exact proportions, although the variance was slight, but I took the mean of all the plates and followed the original as closely as could be done. The detail was very carefully studied from the plates and from the photographs. In the modelling-shop the scale of the detail seemed enormous. Some very interesting comments were made on it by other architects who visited the shop and the consensus of these comments was that the detail was brutal in the extreme, and I was solemnly warned to reduce the scale of it. I was tempted to myself, but I didn't. I stuck as closely as I could to the original, and when the stone was carved and in place you could hardly see the detail at all; although the undercutting was deep, the surface seemed merely scratched, and it was not until the dust had settled on the carving for a year or more that the detail could be actually distinguished. The whole thing bothered me a lot. It was evident, of course, that the scale of the detail was too small, or perhaps I should say the detail was too close; it really amounts to the same thing, and yet it was practically a reproduction of a celebrated Roman example, scale and all.

I was in the Metropolitan Museum one day, and in the architectural section I was attracted by the large casts

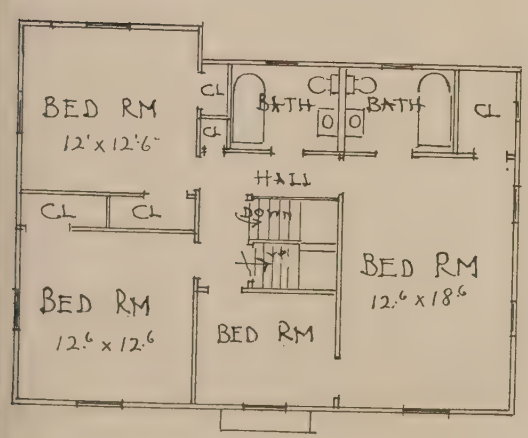
of Roman entablatures that hang upon the wall and which are in duplicate, one cast showing the entablature as it exists now, and an adjoining cast showing the same thing restored. There could be no question of the accurateness of the restoration; the original was in a sufficient state of completeness to show exactly how the detail was expressed; the casts were colored alike, so it was a very fair representation of how the entablature looked when first erected and how it looks now. It was most astonishing. I had seen the casts often, but never thought of comparing them critically from the standpoint of design. There was no comparison. The thing as it exists now, weather-worn and broken, was infinitely superior to its original state. At first I discounted that somewhat, as it is usually the case that age gives a certain charm to any piece of sculpture or architecture, but in this case I was not looking at the original but at plaster-casts, and the more I analyzed it the more I became convinced that the reason the old cast looked better was because it *was* better; there was a unity, a harmony, about it that was entirely lacking in the new. I became determined it was chiefly a matter of scale. In the first place, what gave the scale or set the pace, as it were, to the entablature? Why, the modillions and the dentils, of course. You can cover a modillion with the most delicate ornament, but you can't change the scale of it in its relation to the entablature when seen in its proper location. It projects two feet and a half and is a foot wide, say, and when you see a row of them in the entablature they all stick out two feet and a half and are a foot wide, and no amount of detail can change that, and seen in the sunlight the front of each modillion counts white against a dark space somewhat broader, and the little leaves and things on it don't count at all, except to give texture and a certain play of light in places. Beneath these modillions are the dentils—again an alternate white and dark treatment—and these dentils by their simplicity and regularity count fully as powerfully as the modillions, and they both count well with the great simple shadows on the cap. But the detail on the mouldings is quite different. In the restoration the eggs and darts between the modillions and the dentil course, although large and deeply undercut, are so close to the sheaths and to each other that seen from below there are no pronounced blacks or whites; the mould is a dull gray. On the cast as unrestored, however, the sheaths have in many places dropped off the eggs entirely, or have been so broken that the eggs count almost as strongly as do the dentils, and the similarity of scale is restored. The same thing is true of the other mouldings; fragments have been broken off here and there, and the detail, though increased in scale, takes on a sparkling, lace-like effect, a very rich effect, infinitely superior to the original state.

What, then, is the remedy for new work? Will we have to wait a dozen centuries or so for time to come to our aid, or will we put a large hammer in the hands of some earnest soul and let him go to it? Neither, I hope. We will have to simplify the detail, widen it, get more effect of light and shade, and wherever possible lose the absolute regularity of it. This latter is important. The modillions and the dentils are regularly spaced or approximately so, and if the ornament on the mouldings is opened up so that the repeat counts strongly, there would be a series of horizontal rows of ornament, all with a definite repeat. This would be most unfortunate; it would be worse than the Roman treatment. I think the detail could be handled in the model so various irregularities could occur occasionally, or the detail could be studied in a series of irregular shadows that would be large in effect but would be without the mechanical repeat.

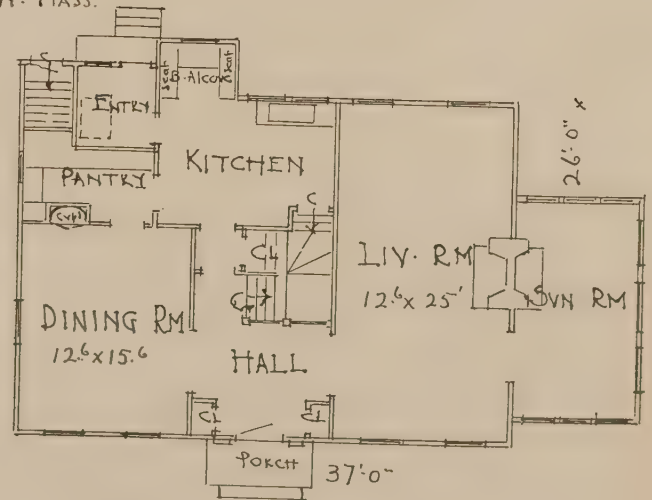
(Continued on page 168.)



GAY AND PROCTOR-ARCHITECTS. BOSTON. MASS.



• SECOND FLOOR •



• FIRST FLOOR

E. B. GRABOW, WINCHESTER, MASS.

(Continued from page 166.)

This is difficult, I know, but it can be done. Of course it should be understood I am speaking entirely of monumental orders at a large scale. On a small order, that is to say below 30 feet in height, the detail is so near the eye, and the modillions and dentils are so small actually, that the difference in scale is not so noticeable.

In previous articles I have spoken of the relation of architrave and frieze faces, and of their relation to the pilaster or other support below, and also have gone into the treatment of frieze ornament on the corners. All these points and principles apply equally to the Corinthian order; perhaps I should say they apply particularly to the Corinthian order because the cornice is so large and of such great projection that the greatest care has to be taken to retain in the entablature the conformity to the line of support, which is absolutely necessary to its continuity. A very common fault in the Corinthian entablature is a break in the outline at the intersection of the cornice and frieze; the cornice sometimes does not seem part of the entablature; the transition is too abrupt. This is particularly the case if the frieze is unornamented. It often helps this condition to tilt the

frieze forward slightly, not so it is noticeable, of course, and it also helps to have a rather considerable bed-mould under the dentil course. This feeling of detachment of the cornice from a plain surface below was noticed by the Romans, for in some cases in which a cornice resembling a small Corinthian cornice is used as an impost there is placed beneath it a small frieze with a roll-mould below, which it serves as a starter for the cornice and connects it with the plain surface of the impost.

There is one point in connection with the corona which deserves attention. If the corona is ornamented, it is absolutely important that the ornament lose its projection as it nears the lip of the mould. In other words, the line of the fillet at the top of the corona must not be broken by any projecting ornament directly below it. This mistake is common. In many cases the corona is ornamented with a leaf motive, and the tip of the leaf curls over in a sort of lip. This forms a succession of little projections which catch the sunlight, and gives a most unpleasant and irregular line to the top of the cornice.

THE END

Should Architects Advertise?

By Gerald Starkey Glenn

UNTIL comparatively recently it was contrary to the code of ethics of the American Institute of Architects for its members to advertise, the idea being that the buildings themselves were the architect's means of becoming known and of gaining prestige. It was thought that the architect who advertised placed himself on a par with the medical quack as compared with the physician, who does not advertise. Under certain conditions the above argument might hold, but it must be understood that there is advertising and advertising, just as there is "archeetecture" and architecture.

It is the function of advertising to educate, to enlighten, to promote true progress. No human achievement great or small is carried forward into successful execution without some form of advertising. Paul Revere, as he dashed on his midnight errand warning the inhabitants of the coming of the "Red Coats," was advertising. Every time two persons converse or correspond, some fact or thing is advertised. Such advertising, however, is disorganized and inefficient.

There is an idea with many that to advertise means to employ "scare-heads" and exaggerated and distorted facts in the hope of inveigling people into buying. There was a time, not many years ago, when such methods were rather prevalent, but within the last decade or so advertising has made long strides toward serving just and truthful ends in frankly promoting legitimate business. There are to-day strong influences being brought to bear for truth in advertising by the more important advertising organizations and by the reputable magazines and newspapers. *Printers' Ink*, the leading advertising magazine, has waged a strong campaign for truth in advertising.

The point that decides as to whether architects should or should not advertise may be brought out by frankly answering this question: Can architects best serve the interests of the community by advertising or by not doing

so? It should be the answer to this question, rather than an artificial code of ethics based on false premises, that should decide the matter.

True ethics in the profession is vital to its proper growth and conduct, and there are many times when professional ethics should be more strictly observed than is the case; ethics that are based on a sense of justice and *esprit de corps*. There are men in the profession, members of the institute, who do not hesitate to win a client away from a fellow practitioner by belittling him, and yet these same men hold up their hands in horror at the mere suggestion that they should "be so unethical" as to advertise. It is only right to observe punctiliously the true rules of fair play, to be gentlemen through and through, but we must be manly men and not affected posers. It is very easy, especially for a temperamental character—and architects to succeed must possess temperament—to become affected, egotistical, and Bohemian; and it is this faction that most vehemently expresses disdain for advertising. It is becoming ever more clearly recognized that an architect must be not only an artist and constructionist but also a sound business man.

The principal function of advertising is to bring together those who have goods or services to sell and those who are in need of them; to inform the latter as to the benefits to be derived from such goods or services and to thus create a desire for them; in brief, to sell goods. If the goods or services have merit it is a distinct benefit to the public to advertise them. It may therefore readily be seen that true advertising, far from being in any sense unethical, is a manifestation of charity, or true ethics, in that it is performing a service no less beneficial to the public than it is to the advertiser.

It is a well-known fact—painfully well known to the architectural profession—that architecture is little understood, and therefore does not get proper recognition. It is con-

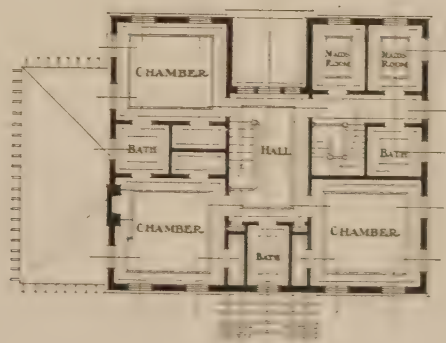
(Continued on page 170.)



HOUSE AT DEDHAM, MASS
FOR W. H. GRAY JR.
JAMES PURDON ARCHITECT BOSTON



FIRST FLOOR PLAN



SECOND FLOOR PLAN

(Continued from page 168.)

sidered to be, by the larger part of the general public, a luxury; very pretty and desirable for the wealthy, but easily dispensed with unless one is rich. The function of the architect is supposed to be to make buildings beautiful, and nothing more. He is supposed to be extravagant and impractical. It is little wonder then, with such prevalent misconceptions, that there are many buildings on which no architect is employed.

How are people to be made to appreciate the value of good architectural services? How are they to learn to realize the great educational value of genuinely beautiful and conveniently planned buildings and homes, especially upon the minds of the young? How are people to learn that the services of a competent architect insure a more durable, more efficiently planned building, and is not an added expense, but the means of keeping the cost of the building down by making every dollar spent bring one hundred cents' worth of building, and thus saving the amount of his fee many times over?

A number of years ago the American Institute of Architects appointed an educational committee to overcome these misconceptions and to educate the public to a true appreciation of architecture and the services performed, but how could a committee which did not believe in advertising hope to accomplish the desired ends? Articles were written on the subject, but, for the most part, they appeared in the technical architectural magazines. The youngest man in the advertising profession could have told them that to reach their public they must use the papers and magazines that that public sees. Had properly written advertisements, by men who understood both architecture and advertising, been run in the general magazines, as well as in the architectural magazines, in the daily newspapers, yes, and even on street-car cards and outdoor signs, a great deal of good would have been accomplished. Everybody would, in time, learn to appreciate the architect and his services.

Education in architecture, as in many other matters, is a slow growth. It is impossible for the average man who grows to middle life in ignorance of its meaning to, when he contemplates building, be educated to its meaning in

a few weeks; even if he happens to come into contact with a good architect. The general public must have it properly, and continuously, brought to their attention in order that its fundamental principles are as well implanted in the public mind as is a knowledge of foods, phonographs, and automobiles. Advertising has brought about a generally prevailing correct idea as to the good points and desirability of these and many other products and services, such as those of the engineer, the builder, building materials, and so forth, and has thereby benefited mankind. The fact that builders and engineers advertise, while architects do not, is largely responsible for the frequent elimination of the latter and the usurping of his functions by the former two.

The American Institute of Architects has now declared that it is permissible for its members to advertise, but the majority, not sufficiently understanding good modern advertising practice, are slow to make use of it, so firmly has the old notion been implanted.

The function of advertising is to sell goods. This may sound unpoetical as applied to architecture, but architecture is a business as well as an art, and if the business got better attention the fine arts side would profit immensely. In order to sell goods, the advertising must be sympathetic to and in harmony with the goods advertised. Advertisements of an architect's services must be refined, artistic, and dignified as to language, typography, layout, and illustration. If the advertisement possesses these characteristics they enhance and ennoble his profession, are the means of providing more people with really worth-while buildings and at less expense, and brings richer rewards to the architect.

Architects can ill afford to continue to be as aloof and exclusive in their attitude to the general public as they have been in the past. Such an opinion has lately been expressed by a number of the leading men in the profession. An architect certainly has no right to refuse to avail himself of legitimate means of publicity, and then complain because the public do not flock to his studio, nor pay him a fair fee.

Architects owe it to themselves, to their profession, and to the public to advertise.

The American Federation of Arts

ART as an active force in American progress will be the key-note of the Twelfth Annual Convention to be held in the Corcoran Gallery of Art, Washington, D. C., in May, by The American Federation of Arts, a national organization for the advancement of art in America, consisting of two hundred and sixty-three chapters in forty States of the Union and with offices in New York and Washington, as well as centres in California and Nebraska.

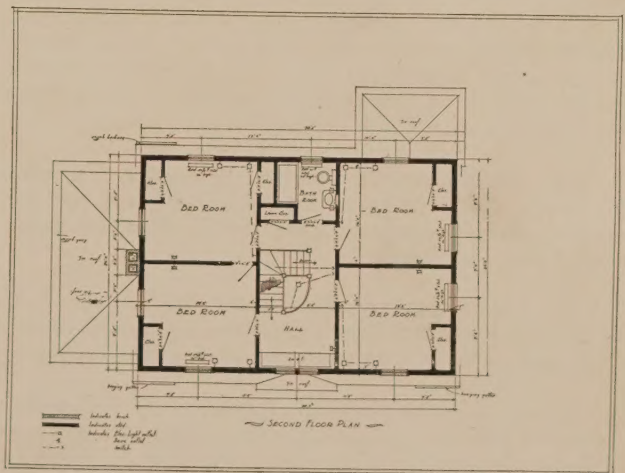
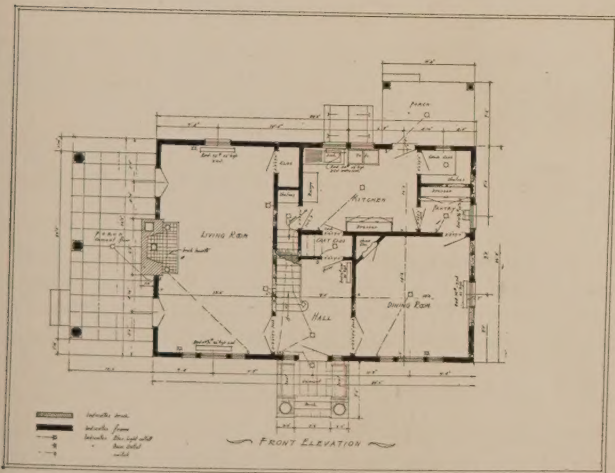
Special sessions will be devoted to Art and the People, Art Education, Art Museums, Professional Art Problems, and The Artist's Point of View.

Under Art and the People there will be a demonstration by Ross Crane of The Better Homes Institute, which is operated by The Art Institute of Chicago, and addresses on "Art in State Fairs," by L. M. Churbuck, director of the Art Department of the Massachusetts State Fair; "Art in the Public Library," by Miss Mary Powell, of the Art Department of the St. Louis Public Library; "Art in the Schools," by Allen Eaton, of the Sage Foundation, and on "The Alliance of the Arts," by John F. Braun, president of the Philadelphia Art Alliance.

Various speakers will discuss "The Artist's Point of View," among them Herbert Adams, sculptor and trustee of the Metropolitan Museum of Art; J. Monroe Hewlett, architect and scenic artist, late president of the Architectural League of New York; George Harding, illustrator and official war artist of the United States on the West Front in 1918; John Taylor Arms, etcher, of New York City, and Albert Kelsey, Philadelphia architect.

Various matters of vital interest as professional difficulties will be discussed, among them the copyright law as related to art, art writing in books and magazines, and promotion of sales of works by American artists.

A special exhibition will be opened at the Corcoran Gallery consisting of examples of British craftsmanship of the present day, a collection brought to America through the efforts of the Detroit Society of Arts and Crafts, and the delegates will inspect the Whistler Collection at the Library of Congress, assembled and presented to the nation by Mr. and Mrs. Joseph Pennell, etchers and writers on art.



HOUSE, M. E. SATTERTHWAITE, BORDENTOWN, N. J.

Fowler, Seamon & Co., Architects.

Announcements, Etc.

Why Many Architects Are Prematurely Gray

By McCready Huston

M*RS. T. WADLEIGH GREEN, wife of the client, determined to be considered:* She owns a spinning-wheel and a genuine Windsor chair, inherited from her Aunt Maria; therefore, she wants to build an American Colonial house around them. Although the lot is only thirty-eight feet wide, she cannot understand what the architect says about the impossibility of using a long axis toward the street.

T. Wadleigh Green, client: He wants a brick house like one he saw from an automobile while driving around Los Angeles. He has drawn a picture of it from memory to give the architect an idea. He does not object if some of Mrs. Green's Colonial designs are embodied with his.

Mrs. Green's mother: She makes her home with her daughter and has in mind her own house, built during the Greek classic revival. Has not interfered yet but thinks the architect is an impractical fellow. "What you need is a good building contractor with some sensible ideas of his own," she has been saying.

Mrs. Green's daughter: Wants an English-cottage style and a flower-garden where she can give her callers tea. She has done some figuring, but after allowing for the cottage and garage, has been able to find only fifty square feet for her garden.

Mrs. Green's friends: They bring in magazines showing "cute" houses on the bungalow order that are just "too dear for anything."

We are in receipt of the "Year-Book of the New Society of Architects, 1920-21." It is a book of great value to every practising architect, containing information of a practical kind upon such matters as the "Registration of Architects in the State of New York," "The City Building Code," "Plumbing Rules," "Mailing-Chute Regulations," "Building Zone Resolution," "The Tenement-House Law." It affords a very complete reference for the various details of up-to-date city building.

Every architect will welcome a copy of the handsome catalogue of the "Architectural Interior and Exterior Woodwork Standardized" published by the Curtis Companies, Clinton, Iowa. And we are sure that they will be pleased to receive the attractively illustrated pamphlets "Restful Rooms" and "The Center of Your World." All of these are admirable examples of good taste in advertising.

The catalogue of the American Ventilating Company, Pittsburgh, American-Larsen Suction-Ventilators, contains specific information regarding the special value and usefulness of these ventilators.

THE ARDEN GALLERY, 599 FIFTH AVENUE.—Mrs. John W. Alexander and Mrs. James C. Rogerson have had a gratifying attendance at their recent interesting exhibitions.

Clients of Mr. Reginald Johnson, the well-known California architect, whose office is in Pasadena, have no difficulty in understanding the plans that he submits. Instead of showing them merely a prospective drawing, Mr. Johnson submits a clay model of the proposed home as it will appear in its landscape environment.

Frank H. Day and Harry E. Bolton announce the opening of an office for the practice of architecture at 24 North Main Street, Gloversville, N. Y. Catalogues and samples are requested.

Technical Pamphlet No. 8, from the Truscon Laboratories, Detroit, contains a discussion of why concrete requires waterproofing, and the properties that an integral waterproofing must possess to operate effectively with the natural properties of concrete. It will be sent upon request to any of our readers.

The display rooms and offices of the American Encaustic Tiling Company, Ltd., have been removed to 16 East 41st Street, New York City.

Gillis & Geoghegan advise us that their new pamphlet, "Ash Removal Equipment," is ready for distribution, and will be sent free upon request.

Greatest efficiency in the operation of G & G Telescopic Hoists can be secured only by the installation and use of several inexpensive auxiliaries. The relation of these to the whole is explained and freely illustrated in a pamphlet entitled "Ash Removal Equipment," by Gillis & Geoghegan, 540 West Broadway, New York.

Specification writers who must determine the proper model ash hoist to install under a given set of conditions will find their work simplified by the use of a recently prepared formula. Unlike most rules, this one has been constructed from the results of practical experience in the manufacture and installation of hoists for all types of buildings over a period of many years.

The New York branch of the Fulton Company, of Knoxville, Tenn., manufacturers of the well-known line of Sylphon Temperature Regulators, Packless Valves, and Steam Specialties, have recently moved from 1476 Broadway to larger and more convenient quarters in the Hudson Terminal Building, No. 30 Church Street, New York City. They have also been successful in securing new and larger quarters for their Chicago branch in the recently completed Wrigley Building on Michigan Avenue, moving from their former location at 175 W. Jackson Boulevard.

Ross & McNeil, architects, New York, announce that on or about May 1 they will remove their office to the Masonic Hall, No. 46 West 24th Street, Room 1528.

Townsend, Steinle & Haskell, Inc., architects, have removed their offices to No. 8 West 40th Street, New York City.

We acknowledge with pleasure the receipt of a handsomely illustrated book from Stone & Webster, Incorporated, entitled "A National Landmark." It presents the splendid buildings of the Massachusetts Institute of Technology, of which Welles Bosworth was the architect. The book is a fine example of dignified and efficient publicity.

It is with the most sincere regret that we announce the death of Mr. William Willet, of Philadelphia, famed for his beautiful designs for stained glass. With Mrs. Willet he designed some of the best-known memorial windows of recent years.



BATTLE OF WILSON'S CREEK. BY N. C. WYETH.

Mural Decoration for Missouri State Capitol. Tracy and Swartwout, Architects.